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THE RUBBER AGE

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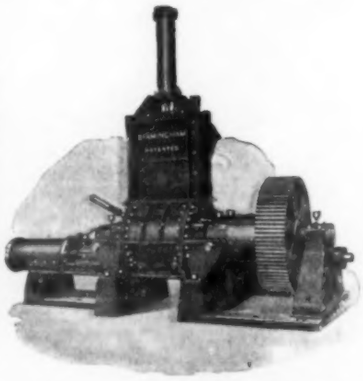

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THE RUBBER AGE

H. S. VORHIS, BUSINESS MANAGER
G. M. SANGSTER, JR., MANAGING EDITOR

VOL. IX SEPTEMBER 10, 1921 No. 11

A Discussion of the Proposed Rubber Producers Corporation

The Rubber Growers' Association, Inc., of London have issued a lengthy document containing H. J. Welch's "Memorandum on the proposed Rubber Producers Corporation, Ltd., setting out some of the objections to it," and the official reply, which deals with the memorandum point by point.

By way of introduction the council of the association says:

"The consequences of allowing the Plantation Rubber Industry to drift are so serious, both from the point of view of share-holders and of the countries and peoples in which the estates are situated, that the Council of the Association desires to give the fullest possible publicity to the following memoranda and the replies to them."

Realizing the vital importance of this effort to stabilize the crude rubber production industry and this highly valuable discussion pertaining to it, the RUBBER AGE reproduces below the document in full. The paragraphs of Mr. Welch's memorandum are given in italics, the official reply in each case following in Roman type:

(1) By reason of its circumstances the rubber plantation Industry is not suited for a combination which will put up the cost of production and the price of sale. Any permanent machinery for restriction of output and consequent artificial maintenance of prices of crude rubber will, in my opinion, prove to be fundamentally unsound and will ultimately place the industry in a position of even greater gravity than that with which it is now faced.

The regulation of supply to demand is not artificial, but is in universal operation. Whereas in most industries this regulation is not done by agreement, but by the independent action of the individual units, there are numerous important industries, where the regulation is done by agreement, as in the Lancashire cotton industry.

Defect of the Scheme

(2) The fatal defect of the scheme is that the combine cannot effectually control supplies of crude rubber and its competitive substitutes, and, so far as it succeeds in raising prices it must stimulate all outside producers and competitors to greater production.

A corporation controlling the output of two-thirds of the total planted area will have the commanding position in the market. Control of two-thirds of the total planted area can only be obtained with the support of about 80 per cent. of the area owned and managed by Europeans. Their estates are more productive and yield a higher proportion of the standard qualities of rubber than do the Chinese and native. Hence the Corporation would control more than two-thirds of the normal output, and considerably more than two-thirds of the standard qualities of rubber. As the tire trade, which consumes about 70 per cent. of all rubber, requires standard qualities for large scale production, members of the Corporation will certainly be in a position to secure the bulk of the orders for these grades. The majority of the acreage outside the Corporation would be Chinese and native, much of which has been badly handled in the past, and the production from which cannot be largely increased in the near future. Considerable areas of native rubber are out of production entirely, and it is doubtful whether the worst of these will ever be reopened.

(3) It would not control supplies even supposing owners of two-thirds of the planted areas came into the combination, which is very unlikely.

Unless two-thirds of the planted area agree to come into the Corporation, the latter will not be brought into existence.

(4) If the proposed combination succeeds in its main object, it will gradually undermine the economic foundations of the industry. It will keep in bearing non-economic areas at the expense of economic ones—it will encourage competition and unrestricted tapping from producers of rubber outside the combine, many of whom might othewise have to restrict or cease tapping. It will keep in production the expensive as well as the cheaper producing areas inside the combine by restricting production of all.

Capital Saved

If the proposed Corporation succeeds in its main object it will save a vast amount of capital, running into tens of millions sterling, which would otherwise have to be written off as lost.

(5) A combination which lowers cost and price by effecting economics in working and by greater efficiency need not control the competitive supplies, because then it can fight its competitors. But this combination will be unable to penalize its competitors in any way. On the contrary, by putting up cost and by restricting the outputs of its members, it will penalize its own members as compared with the outside producers of crude, wild, and re-made rubbers, etc. Generally it is by economics that greater profits are made by trusts and monopolies, not by increasing cost and price of their products.

There is nothing in the scheme to prevent every member of the Corporation effecting economies and introducing greater efficiency in working.

(6) The special circumstances of the industry which make it unsuitable for such a combine as is proposed include:—

(a) the great number of producers and of the countries of production. The producers are numbered in tens of thousands, and rubber can be produced in Ceylon, India, (including Burma), Malaya, Sumatra, Java, Borneo, Africa, South America, probably the Philippines, New Guinea and other places;

(b) the various nationalities interested in the ownership of plantations or sources of crude rubber. An international combination is the most difficult to work successfully, and also to maintain the loyalty of its members;

(c) the large areas in the world suitable for rubber and still unplanted;

(d) the great number of producers of rubber who cannot be brought into the combination;
(e) the competition a combine would have to face from:—
(1) plantation rubber from estates not in the combine,
(2) wild rubber;
(3) reclaimed rubber;
(4) fillers and substitutes;
all of which are sometimes referred to in this memo. as "Competitive supplies and substitutes".
(f) the great difficulty in ensuring the loyal adherence of its many members and in preventing evasion of their obligations.

(a) (b) (d) Until the effort has been made it cannot fairly be assumed that any of these considerations are insuperable obstacles. About one-third of the total planted area is controlled in the United Kingdom, and this represents one-half of the acreage required to justify the establishment of the Corporation. The Dutch, French, and Belgian interests are mostly members of the International Association for Rubber Cultivation in the Netherland Indies at the Hague, which has taken up the question of the establishment of the Dutch Corporation referred to in the scheme, and there are local associations in the Eastern producing countries which facilitate the work of ascertaining what support can be obtained.

New Capital Improbable

(c) In view of the potential output of the area already planted with rubber it is most improbable that capital will be found to plant up new areas of rubber which cannot be tapped till five or six years hence at the earliest, so long as areas of mature rubber are purchaseable at substantially less than replacement cost—as is the case at present. If the Corporation does come into existence it is not unreasonable to expect that the governments which are vitally concerned in the re-establishment of the prosperity of the industry would give it support at least to the extent of prohibiting further planting of rubber until the position has been righted.

(e) The question of competition from plantation rubber outside the combine has already been referred to. With regard to wild rubber the output of this has been declining for some years past. The cost of collection is such, and (with the exception of fine para) the quality is so inferior that competition from this source is negligible so long as there is a sufficient supply of good quality plantation rubber available at a reasonable price. Fillers and substitutes all play their part in the building up of various classes of rubber goods, other than pneumatic tires, and a proportion of them will continue to be used irrespective of the price of raw rubber.

The risk of more reclaimed rubber and fillers being used will be equal whether the price of plantation rubber is raised by means of the Corporation or by allowing a large portion of producers to go to the wall.

(f) If the Corporation is established and managed successfully the advantages of membership will render this risk negligible, for "unity is strength." In any event it is intended that the penalties for breach of agreement shall be substantial.

(7) The form and conditions of this proposed Combination are unique and have no precedent, and this should make us pause. There is no fusion of interests of the members, no compulsory purchase by the combine of the rubber produced by its members, no sharing of profits as between members. The combine is international, will consist of two Corporations, and will combine huge numbers of producers of different nationalities and with varying interests.

There is nothing novel in a combination for mutual protection on the part of those engaged in the same industry. The primary interest of the several producers is and must be to preserve their capital assets and to do their utmost to earn a reasonable profit thereon. Plantation rubber, properly prepared, is of equal market value whatever its country of origin, and all nationalities thus meet on common ground. At the moment Ceylon and South India and Burma have an advantage over other countries by reason of the low rupee exchange, but the par of the rupee has been fixed at 2s., and when exchange rises the temporary advantage enjoyed by producers in those countries will vanish.

(8) The real and permanent needs of the industry are:
(a) prices sufficiently low to maintain the economic supply and demand of plantation, wild, re-made rubbers, etc., in equilibrium;
(b) cheaper production;
(c) efficient and economic management;
(d) sound fundamental conditions.
The proposed combine will be adverse to all these conditions.

(a) The demand is not constant, but while it is at present less than it was during 1919 it may be expected to increase during the next few years. The rate of increase cannot yet be determined, and unless supply is regulated violent fluctuations of price will continue. These fluctuations have a serious influence in restraining an increase in demand, and in discouraging new uses; indeed it is not too much to say that stability of price is one of the most pressing needs of the rubber goods manufacturing industry.

(b) Cheaper production is certainly essential, and the stabilization of the price at a reasonable level will do much to assist in bringing this about. If matters are allowed to drift until a sufficient proportion of producers are out of business and supply is ultimately overtaken by demand, there will be no security for the present proprietors who may be strong enough to survive. Once demand has overtaken supply, prices must rise, and there will then be such keen competition for labor to bring into tapping trees which have been out of tapping, that costs will be forced up as they have been in the past when labor was in short supply.

(c) Every producer should in all circumstances aim at economical and efficient management, but many of the so-called economies enforced by the present slump will, if continued long enough, impair future productive power. If producers are united in the Corporation it should be possible to obviate a recurrence of the uneconomic extravagance which prevailed in 1919.

(d) If the Corporation does not eventuate and matters are allowed to take their course unguided, it seems clear that a large acreage of rubber will have to be abandoned or sold to the highest bidder. "Sound fundamental conditions" will not be established thereby except for those who may be able to buy such estates at a price well below replacement cost, involving the present proprietors in a tragic loss of capital.

When 95 per cent. of the industry is losing money a long purse may upkeep a poor estate, while a better property may have to be sacrificed. What will be the position of a "survivor" (called X) whose estate stands him in at £50 per acre when he is in competition with the new owner (called Y) of an identical property which has been acquired as "wreckage" at £25 per acre, a figure by no means fantastic to-day under a forced sale? Y will get as good a return on his investment at 1d. per lb. profit as X will get at 2d. per lb. profit, which in other words means that by neglecting to support the formation of the Corporation X has assisted in transforming a competitor who was financially weaker than himself into Y, who will have at all times 2 to 1 the better of him. If X is able to find the money and himself becomes Y it may appear good business for X, but how many X's are there in the industry to-day with sufficient cash to buy "wreckage" and yet be sure of weathering the storm?

Increasing the Supply

(9) So far as the proposed combine, by restriction of output of its members forces up the price, it will tend to increase the supply from competitive rubbers and substitutes and this increase will be upon a non-economic and artificial basis.

Low prices tend to reduce supply and therefore to keep out competitors, except so far as they can compete upon an economic basis.

The object of the proposed Corporation is to save the Industry collectively, not to inflate the price of rubber in an unsound way. It will be the duty of the directors of the Corporation to do everything in their power to encourage the consumption of increasing quantities of rubber, and this will certainly be assisted rather than impeded by stabilizing the price at a reasonable level. If matters are allowed to drift the point will ultimately arise when such a large portion of the present acreage will be out of production and labor will

be disbanded to such an extent that a shortage of rubber will ensue. Prices will then rise and there will be a scramble for the available labor, resulting in a general increase of wages and cost of production. In due course the supply of rubber would again exceed the demand, and a further crisis would have to be faced. In the long run a continuously adequate supply of rubber will be had at a lower and steadier price through the formation of the Corporation than if matters are left entirely to individual action. The violent fluctuations in the price of rubber during the past ten years are absolute proof that hitherto the industry has failed to establish "sound economic conditions." To correct the errors of the past and to secure the advantages of combination naturally involves some expense. At present sellers are legion, competing anxiously with one another in an overstocked market, and it requires but little imagination to appreciate that the simple organization necessary under the scheme will more than pay for itself by eliminating much of the present internecine competition.

The Question of Competition

(10) Suppse for example, two-thirds of the plantation industry join the combine and one-third remains out, and that the combination restricts the output of its members to 50 per cent. of the normal output. Then, assuming other things to be equal, the remaining one-third of the plantations producing an unrestricted crop will produce one ton of crude plantation rubber for every ton produced by the combine. If the members of the combination were restricted to 75 per cent. of their normal outpnt the comparative figures would be two tons produced outside for every three tons inside. The combine would have to compete with this production from plantations apart from any extra non-economic competition from wild and reclaimed rubber and fillers and substitutes caused by the increase of price.

On this assumption, which must in any event be modified in favor of the members of the Corporation for reasons indicated in Par. 2 of this reply, experience of actual restriction shows that apart from upkeep expense, which is constant, the cost of producing a pound of rubber is less when tapping is done on selected areas than when the estate is being tapped to fullest capacity. Individual trees and individual areas on each estate vary in productivity and in bark renewal, and agriculturally the estate which is tapped 50 per cent. of normal for a year or two will be better at the end of that period than the estate which is tapped to full capacity. The future value of an estate is in inverse ratio to the bark removed, and if it were not for the labor problem it would undoubtedly be better to suspend tapping altogether when prices are unduly low and run the property on a " caretaker" basis than to go on using up bark for no profit.

(11) Further, to the extent that the combine buys up and holds rubber the members will, in effect, be realizing less than even their restricted output, while outsiders will be selling the whole of theirs at the temporarily increased prices brought about by the Combination and by its purchases of rubber.

Further, as demand depends partly upon price, the combine by forcing up prices, will decrease the demand.

Lower prices mean increased demand and higher prices decreased demand. If the scheme raises prices above their economic level (which is the main purpose of the scheme) it will decrease the economic demand.

Low prices encourage new uses and extensions of the present uses; high prices discourage them.

The real and permanent interests of producers require increased demands and uses for plantation rubber on a sound economic basis and do not demand an artificial price based upon a combination which must tend to lower the demand that would otherwise exist and increase supplies which would otherwise not be forthcoming.

Increased Costs

A stable price at a reasonable level means increased demand. The cost of the raw rubber is but a fractional part of the selling price of the finished article.

(12) Further, the permanent interests of the producers lie in the reduction of the cost of production so far as is compatible with the efficiency and maintenance of estates. The combine, however, effects no economy, but only adds to the cost of production of its members and thus puts them at a disadvantage with all their competitors.

The cost of production will be increased for the members of the combine by:—

- *(a) the necessary addition to the cost per lb. brought about by a restricted output. A restricted crop always costs more than an unrestricted one;*
- *(b) the cost of the new organization, staff, etc. It will not only require offices and staff, etc., wherever a company is formed, but it will apparently require organizations and staffs in the various countries of production;*
- *(c) the partial removal from the members of the Combine of the incentives to economy in working and efficiency in management which low prices might otherwise compel;*
- *(d) the special amounts to be deducted from the price of rubber sold by the members and "accumulated by the Corporation as surety for the due fulfilment of the members' obligations to the Corporation."*
- *(e) any loss the combine may sustain over its dealings in rubber.*

COOLIES CARRYING LATEX ON EAST INDIAN RUBBER PLANTATION

A farthing per lb. should amply cover the actual cost of working the Corporation (a farthing per lb. on every 10,000 tons=£23,000). The balance of the levy will remain the property of the members, subject to the due fulfilment of their obligations, and when an adequate fund has been established, the levy can be reduced.

Noticeable Defects

(13) The scheme suffers from several specific defects. They include the following:—

It does not define the basis of restriction between its members. It proposes it shall be "equitable." What will be equitable restriction in the different countries, among the areas and countries having different ages of maturity, different productivity per tree and per acre, differing ages of trees, differing cost per lb.?

Estates producing at say 6d. or7d. per lb. will be placed on a par as to restriction with estates producing at say 1s. or 1s. 3d. This is bad business economy.

The scheme cannot work equitably as between the members themselves. Some cheap producers will be worse off inside than outside. There is and can be no fusion of interests.

When the Rubber Growers' Association arranged its first temporary scheme for restriction great difficulty was experienced in fixing on an equitable basis, and in the latter scheme now in force a compromise (which most people regard as very unfortunate) had to be adopted which made the restriction depend on the producers' own estimate of what his normal output would be for the current year.

What is the remedy for a company once it has joined the combine if it considers the basis of restriction is not equitable?

The court of directors, when nominated, is to define the precise method of arriving at an equitable basis for restriction, and they must be trusted to deal with this problem in a fair and reasonable manner. Restriction on an equitable basis should not alter the advantage enjoyed by the cheaper producer.

(14) It is proposed that there shall not be one combine for the British and Dutch owners, but two. They will be "similar," but it is not clear that they will be identical in capitalization, subscription per acre, constitution, regulations, etc.

A joint committee of the two corporations is to be formed, but the scheme is vague about its constitution and powers. Will the committee control both combines or will it be advisory only? How is it to be constituted? What will be the respective voting powers of the Dutch and British members? Will votes depend on acreage or production or capital at risk? What is the remedy for British companies if the two combines do not agree as to restrictions and selling arrangements, or if the Dutch regulations for restriction or sale at any time are not considered equitable in relation to the British or if the regulations are evaded?

If the Dutch agreed to dissolve their corporation could a British company member withdraw from the British corporation?

It is not essential that the *capitalization* of the Dutch corporation should be identical with the British corporation, but it is essential that both should have identical primary objects as set out in the scheme and should be established for a like period of time.

(15) The plantation companies joining the combine will lose their freedom of action, however circumstances may vary between the companies or may change in the future, and they cannot retire if dissatisfied.

The combine is to settle:—

(a) the amount to be produced whatever the varying costs of production between its members;
(b) the quantities of rubber to be sold;
(c) the price of sale;
(d) the time of sale.

One company having funds may wish to hold its rubber for a better price. It cannot do so. Another short of money requires to sell. It is equally hampered.

Companies may wish to sell or not to sell forward. One company, producing cheaply, wishes to secure a profit at current prices. It cannot do so without approval. Another has to sell perhaps below cost of production because the Combine says it must.

If a company is dissatisfied with the combine, it cannot withdraw unless a majority of 75 per cent. of the shareholders vote for liquidation.

Suppose a member has a good offer for an estate, but the purchaser will not take shares in the combine, will the member be able to sell? If it cannot, this may be a serious hardship. If it can, it is an easy means of evasion of the combine.

This is so, but the advantages offered by the establishment of the Corporation far outweigh these objections.

(16) Areas outside the combine, other conditions being similar, will always be worth much more per acre than those inside, probably at least 50 per cent. more. This fact is obvious and shows the great weakness of the scheme. Once outside thre will be nothing to induce a plantation owner to join. Outside he has unrestricted production, larger profits, freedom to sell, etc., and all the benefits of being inside without its obligations or the extra cost per lb. to be borne by insiders.

This is absolutely disputed.

(17) The scheme suggests raising £3,000,000 by debentures or other finance. If by this other finance is meant temporary bank finance, it might mean a serious menace to the stability of the combination.

The other finance would have to be secure for at least as long a period as the debentures.

(18) The Corporation is to be empowered to buy rubber. This means speculative buying to maintain price. It is a most dangerous game and most efforts of the kind, Government or private, in other commodities, have sooner or later had disastrous results.

Losses on purchases of rubber, interest on loans and debentures, and all working expenses and amounts carried to reserve are to be assessable upon the members from the price received for their rubber. This is a very uncertain liability to be borne by members.

Power to Buy Rubber

Power is given to the directors to buy rubber belonging to the members, but this is not likely to be exercised in a speculative sense. In any event the directors must be trusted to exercise their powers with reasonable prudence.

(19) The Corporation is to lend money on security of estates. To the extent it does so its resources will become "frozen." Further fresh loans will tend to maintain immoture areas as potential producers which otherwise might not be maintained. Any such Corporation as that proposed should keep its assets liquid.

This power must obviously be most cautiously exercised. If the Corporation comes into being it is anticipated that confidence in the future of the industry will be re-established and that finance of this nature will be forthcoming without the necessity for encroaching on the Corporation's resources.

(20) For the above reasons, among others, can directors of companies, possessing average advantages in lowness of capital cost per acre, cost per lb. of production, means of finance, etc., advise their shareholders to give up their present freedom and assume all the uncertainties and liabilities involved in joining the combine.

As supplies cannot be effectively controlled by the combine will it not be better to rely upon the usual economic forces to balance supply and demand, and to assist in bringing about this equilibrium by such temporary restrictions or cessation of production as seem advisable in the interests of the com-

(Continued on page 420)

The Presence of Manganese in Raw Rubber and the Origin of Tackiness

By G. Bruni and C. Pelizzola

The problem of the origin and nature of tackiness of raw rubber is not yet fully solved. It is generally agreed that there are different types of tackiness. I can only refer to the most recent and authoritative books (*O. de Vries, "Estate Rubber, Batavia, 1920," page 361; Whitby, "Plantation Rubber, London, 1920," page 100.*)

It is some time ago that we started special researches with a view to studying intimately the physico-chemical nature of the changes involved in tackiness. This work has not yet been completed, and its result will be published in due course. But they have led us to discover some facts about the origin of tackiness, which we consider not uninteresting and which may form the subject of the present paper.

In the course of our experiments we tried to obtain tackiness artificially. It is well known that this can be done by by using copper compounds, but other substances may be used with success, and we found that manganese dioxide is a very efficient agent to this purpose. Thomson and Lewis (Mem. Manchester Lit. and Philisoph. So., 1891, 4, 266) state black manganese oxide when mixed with rubber causes the total deterioration, in ten days, when the mixing is heated to 140 deg. F. (71 deg. C.). We obtained the best results with a colloidal manganese dioxide prepared by precipitating a solution of potassium permanganate with sodium thiosulphate (*see Newton Friend, a Textbook of Inorganic Chemistry, vol. viii., by M. Doucaster, London, 1915, page 285.*)

When 1 per cent of this dioxide is mixed with rubber and the mixing is left to itself at ordinary room temperature (16-20 deg. C.) the stickiness very soon begins to appear, and after a few weeks the rubber is very adhesive and almost fluent.

Having thus found that manganese dioxide is such a powerful agent in bringing about artificial tackiness, it came to our mind that to the same agent might perhaps in many cases be attributed the origin of natural tackiness. This was rendered more probable by the large diffusion of manganese compounds in soils and generally in nature, and by the well-known activity of minimal quantities of this element. This latter point was illustrated by many writers, and particularly with classical researches by M. G. Bertrand. (See among other books on this subject, "*D. Olaru-Role du Manganese en Agriculture,*" *Paris, Bailleries, 1920*).

Little Known Regarding Manganese

About the normal presence of manganese in raw rubber very little, if anything, is known. The few observations made by former writers upon its bearing on tackiness had given negative results.

De Vries ("Estate Rubber," page 366) states that traces of manganese added either in the form of manganese salts to the latex or used as potassium permangante to wash and disinfect sheets are not known to cause any tackiness. So far as this procedure is concerned we are able to confirm the assertions of the said writer. Potassium permangante in solid form is indeed very active in bringing about tackiness, as may well be expected from such a powerful oxidizing agent.

K. Gorter (*"Med. Rubber II., page 48; "Rubber Rec., 1914," page 388*) states that he found the same, very small amount of manganese in tacky and sound parts of one sheet. We are not prepared to dispute this single case, although our experience, in the vast majority of cases tried, draws us to an opposite conclusion.

Manganese can be detected and estimated with sufficient accuracy even when present in very mimemal quantities. We employed a method that was worked out by M. G. Bertrand (*Recherches et dosage de petites quantities de manganese, en particulier dans les substances organiques, "Bull, Soc. Chim. de France," 4eme serie, vol. ix., page 351, 1911*). The procedure may shortly be outlined as follows:—The rubber samples are incinerated; the ashes are boiled with pure dilute sulphuric acid, the latter is totally evaporated, and the sulphates thus formed are dissolved in dilute nitric acid. The solution is heated with potassium persulphate and silver nitrate. The manganese is thus oxidized to permanganic acid. The method can easily lead to a colorimetric estimation of manganese by comparing the coloration obtained with those given by known amounts of this element. All the figures given are the result of many tests effected on the same sample. Blind tests showed that the reagents employed did not contain manganese, not even as traces.

Samples Analyzed

We analyzed by this method 11 samples of different kinds of sound rubber, with the result that manganese was found to be always present in a very small proportion, as may be seen by Table I.

We proceeded then to examine samples of tacky rubber. We were able to collect 12 different samples, chiefly crepes. Some of them were found among small old parcels in our stores, of unknown origin; other among low-grade crepes recently bought on the Singapore market. We were indebted for the remaining samples to the kindness of Mr. Spoon, of the Central Rubber Station, Buitenzorg, and Mr. Wierman, of the Sipef Laboratories, Kuala Lumpur, and to Messrs. Weise, Rotterdam.

The results may be summarized as follows:—Of the seven samples examined showing heavy tackiness, six contained a comparatively large amount of manganese, with a mean value of about 100 times as large as the average found in sound samples. The only exception is given by No. 7, a slab of Congo rubber.

The samples of rubber showing a light tackiness were found to contain an amount of manganese considerably lower than the six above referred to, but amounting at least to eight times the average found in sound samples. Only No. 12, a brown crepe, which cannot properly be termed tacky, but shows only a very slight beginning of stickiness, contains a lower portion of manganese, but always about four times the average of sound rubbers and more than double the maximum percentage found in them.

The results seem to us to be sufficiently exhaustive. We of course, are not prepared to maintain that tackiness is in every case produced by manganese, but we think we have proved that the presence of a sufficient quantity of this element is in many and probably in the majority of cases the determining factor.

Our experiments are, however, continuing, and we would welcome any parcels of tacky rubber our friends would be good enough to send us for experiment.

How it is that abnormal quantities of manganese come into the rubber, whether from the latex or by simple contamination with earth, is dubious. Perhaps it comes in both ways. It is known that tackiness is frequent chiefly in lower grades, such as earth-crepe.

As to the mechanism of action of the manganese oxides, we prefer the theory of Mr. Bertrand: maganous oxide MnO, deriving from the hydrolysis of manganous salts, acts as a so-called auto-oxidizing substance, i.e., it reacts with an O_2 molecule, combining with one of its O-atoms and setting the other free.

$$MnO + O_2 \longrightarrow MnO_3 + O$$

The O-atom in *statu nascendi* exerts a very powerful oxi-

A paper read at the International Rubber Conference, London.
India Rubber Journal, London

dizing action. The MnO_2 acts also as oxidizer and reduces again to MnO.

We have thus a cyclic process which can continue indefinitely.

We shall further point out that we have treated some of other tacky samples with a 40 per cent water-alcohol mixture, and upon the extracts we have tried the reactions of oxidizing enzymes (oxydazes and peroxydazes), but always with negative results.

TABLE I.

Samples of Sound Rubber.

		Mill. gr. Mn. in 100 gr.
1.	Brazilian soft fine Para	0,1875
2.	Smoked sheet from Ulu Tiram Plantation (Johore)	0,125
3.	Do. Seafield (F.M.S.)	0,125
4.	Do. Koswana (Ceylon)	0,250
5.	Do. Kahawatte (Ceylon)	0,250
6.	Do. Vico Langsar (Sumatra)	0,125
7.	Do.,origin unknown, bought at Singapore	0,125
8.	Crepe, first latex, bought from Messrs. Weise, Rotterdam	0,250
9.	Crepe, almost first latex, bought from Messrs. Weise, Rotterdam	0,0625
10.	Slab crepe, Sipef, Kent Estate	0,125
11.	Slab, from our plantation, Ulu Tiram (Johore)	0,125
	Average	0,16

TABLE II.

Samples Presenting Heavy and Uniform Tackiness.

		Mill. gr. Mn. in 100 gr.
1.	Smoked sheet from Netherland Indies (supplied by Messrs. Weise, Rotterdam)	20,00
2.	Brown crepe from our stores, origin unknown	20,00
3.	Brown crepe from our stores origin unknown	20,00
4.	Brown crepe from our stores, origin unknown	20,00
5.	Do. from Netherland Indies (from Messrs. Weise, Rotterdam)	20,00
6.	Washed crepe, Java (from Central Rubber Station, Buitenzorg)	10,00
7.	Slab of Congo rubber	3,75

TABLE III.

Samples Presenting Light and Irregular Tackiness.

		Mill. gr. Mn. in 100 gr.
8.	Pale crepe, Netherland Indies (from Messrs. Weise, Rotterdam)	2,50
9.	Pale crepe, Netherland Indies (from Messrs. Weise, Rotterdam)	1,00
10.	Do. F.M.S. (from Mr. Wierman, Kuala Lumpur	1,25
11.	Different parcels of a lot of dark crepe, origin unknown, bought at Singapore:—	
	(a)	2,50
	(b)	3,75
	(c)	3,75
	(d)	2,50
12.	Brown crepe, origin unknown, bought at Singapore, presenting only a slight beginning of stickiness	0,625

A Discussion of the Proposed Rubber Producers Corporation

(Continued from page 418)

pany itself as well as of the industry? When production begins to increase again it will be upon a sound economic basis, the cheaper producing areas being first brought back into bearing, with such a competitive production from plantation, wild, re-made rubber, etc., as the price and cost justify.

Demand and new uses will be stimulated by the price instead of being restricted by raising it artificially, and both supply and demand will depend upon economic forces, which will ultimately prove a safer foundation than that which would be brought about by a combine of a section only of the producers.

It must be recognized by all that such a Corporation, with substantial accumulated funds, can be an immense power for good, to mention only propaganda, which is as yet in its veriest infancy, and the development of new uses for rubber on a scale that is at present impossible.

The Corporation can only come into being if the prospective members are prepared to work together for the common good of the industry, which has been built up essentially in a spirit of co-operation, with only the friendliest of rivalry.No insuperable difficulties will arise if that admirable spirit is allowed natural scope at this time when the industry is face to face with its first real crisis.

On August 10 a manifesto signed by 35 influential firms of jobbers and brokers on the London Stock Exchange vitally interested in the rubber planting industry was issued as follows:

"We, the undersigned, members of the London Stock Exchange, vitally interested in the rubber planting industry, are emphatically of the opinion that the proposals of the Rubber Growers' Association ought to have the hearty support of every investor in the industry, and we are astonished to find that opposition to the scheme is forthcoming from quarters to which shareholders as a body should be entitled to look for a lead in these times of difficulty and danger.

"We address this letter to you in the hope that we may strengthen the hands of those who, with suitable measures, are now trying to overcome the present difficulties—measures which will in our opinion benefit every shareholder who has money invested in rubber."

Vulcanizing Rubber Solutions

H. P. Stevens in British Patent No. 164,770, dated August 4, 1921, describes a process for making solutions or spreadable dough of undeteriorated vulcanized rubber, which are suitable for the waterproofing of fabrics, etc. These solutions are made by vulcanizing rubber in the presence of a solvent under certain conditions of (a) concentration of the rubber solution, (b) quantity of the vulcanizing agent used and (c) mastication, which are regulated very carefully and exactly.

As far as the concentration of the rubber solution is concerned, it has been found that when this is low, that is between one half and 2 and one half per cent, the final product does not exhibit the properties of vulcanized rubber, but remain soluble in the benzené. If the solution is too concentrated, then a jelly is obtained which is altogether unworkable. A suitable solution of rubber, which gives good results, contains 10 per cent of rubber or even as low as 5 per cent rubber.

The amount of vulcanizing agent that is used should be limited and the final product should contain preferably 1 to 4 per cent of combined sulphur. In all cases the rubber should be masticated either before or during treatment with the solvent. In case a gel is produced during the vulcanization, the mastication should be continued in the presence of additional solvent. When this is done, the gel can be broken down.

The vulcanization can be carried out in the following ways: 1. By the heating together of solutions of rubber and sulphur, with or without the addition of other ingredients such as accelerators, in solvents which have a higher boiling point than the normal temperature normally used in the vulcanization process.

2. By heating solutions which have a low boiling point in a closed vessel.

3. By partially vulcanizing the rubber and then heating it with a solvent.

4. By adding a limited amount of sulphur chloride for example, 1 per cent and masticating.

For example, smoked sheet is broken down, mixed with one ninth of its weight of sulphur and sheeted. One half part of aldehyde ammonia is dissolved in 500 parts of crude benzol and 50 by weight of the sheted mixture is added. The whole is placed in a sealed vessel and the air is exhausted. The vessel is heated to 135 degrees C. for two hours. When the mixture has cooled off, the viscous liquid is poured off and may be mixed with mineral fillers and diluted with additional solvent if that is required and then used for the waterproofing of fabric in the usual manner.

In another example, 9 parts of rubber and one part of sulphur are vulcanized for 1½ hours at 35 lbs. per sq. inch pressure. Two grams of this rubber are placed in a tube with 20 cubic centimeters of benzene, the air is exhausted and the tube is sealed. When the benzene is absorbed, the tube is heated for 3 hours to 135 degrees C.

In a third example, 600 parts by weight of rubber which has been masticated for 1 to 3 hours on cooled rollers are placed in a Pfleiderer machine and 1550 parts by weight of solvent naptha (boiling point 138 to 140 degrees C.) are added. 6.7 parts by weight of sulphur chloride are mixed with 520 parts of naptha and gradually added to the rubber solution with constant stirring. Mastication continues for 4 to 6 hours.

ABSTRACTS

Technical — General — Commercial

New Process for Vulcanizing Rubber in the Cold

A new process for the vulcanization of rubber in the cold is described by G. Bruni in the *Giornala Chimica Ind. Appl.*, 1921, number 3, pages 197 to 196. The process has been patented in Italy (Italian Patents Nos. 173,322 and 173,364 Vol 496).

The use of accelerants in the vulcanization of rubber is well known, but the fact that these accelerants have a much greater action when they are produced in the nascent state in the interior of the rubber mass itself has not received much attention up to the present time. The real cause of this phenomenon is not exactly known, but it is a fact that when the accelerants are formed in the rubber, instead of being added to it as such, both the rapidity of the vulcanization is increased and what is more interesting, the temperature at which the vulcanizing process takes place is reduced and we as a result have vulcanization in the cold. This is principle on which the Bruni process is based.

It was found that the organic substance, known as thiocarbanilide or diphenyl-sulpho urea was an accelerant of the above type. This compound belongs to the aromatic amine class and is formed by the action of carbon disulphide on aniline, according to the following equation:

$$2C_6H_5.NH_2+CS2=CS(NH.C_6H_5)_2+H_2S.$$

Aniline and carbon disulphide react to give the accellerant and sulphuretted hydrogen gas.

When this substituted urea is used as an accelerant, it is found that the accelerating action is rather weak and in general practice, the substance would hardly be considered as having an accelerating action. But this holds good only when it is used alone. The addition of a metallic oxide, such as zinc oxide, increases the rapidity of the vulcanization process very materially. The vulcanization is complete within 30 to 45 minutes at a temperature of 135 to 140 degrees C.

However, when the thiocarbanilide is formed within the mass of rubber itself, then the accelerating action is increased to such an extent that vulcanization takes place in the cold. The formation of the accelerant within the rubber or rubber mixture can be accomplished in two ways. The rubber may be compounded with sufficient sulphur, metallic oxide (generally zinc oxide) and aniline. Then the articles, into which it has been formed, may be placed within a suitable chamber and subjected to the fumes of carbon disulphide at the ordinary temperature. It is important to see that a very intimate mixture of the ingredients is made. A device for vaporizing the carbon disulphide must be provided for. The pressure is atmospheric. In the second process, the compounding of the rubber is accomlpished in the usual manner in the regular rubber mixers and then vulcanized in a bath of the vulcanization agents. The same materials are used as above, but they are dissolved in an inert solvent, such as benzol, benzine, carbon tetrachloride. The carbon disulphide is added to this solution in great excess over that required for the reaction. The articles of raw rubber are placed in this bath and left there at the ordinary temperature, until they are vulcanized. In both cases, the vulcanization is perfect in every respect. Instead of aniline, various homologues of aniline may be used, such as, orthe para and meta toluidine, xylidene, various aromatic amines, alpha and beta naphthyl amine, etc. In each case a different thio substituted urea will be obtained.

In making up the vulcanizing mixture, 8 parts of sulphur, 20 parts of oxide of zinc and 6 parts of aniline are added to 100 parts of rubber, and the mixture in the form of various articles is then subjected to the vapors of carbon disulphide. In the second process, the same proportions are used and the mixture of the sulphur, zinc oxide and aniline is dissolved in 600 parts of benzol to which 100 parts of aniline are added. The vulcanization is then accomplished by submersion of the raw rubber articles in this solution.

The use of metallic oxides is necessary in order to fix the evolved sulphuretted hydrogen gas. Sulphides are formed which, it is also claimed, have a very marked effect on the vulcanization and aid in its accomplishment at a low temperature and with rapidity. It is said that this process has some important advantages over the Peachey process, in that it avoids the handling of gaseous acid substances, such as SO_3 and of sulphurretted hydrogen as well, which corrode the apparatus and necessitate heavy repairs, and also in that the formation of polythionis acids as by-products of secondary reactions is prevented. The process is a very interesting one and further developments are awaited.

A Cement for Vulcanized Rubber, Hard Rubber, etc.

German Patent No. 322,613 is concerned with the manufacture of cements for fastening together pieces of vulcanized rubber or hard rubber. The cement consists essentially of a solution of celluloid in acetone or other solvents, to which shellac, rosin or other resins are added. The cement attains in this manner a hardness which is about the same as that of the vulcanized rubber and which can be altered by varying the proportion of the added resins. For example celluloid is dissolved in so much acetone that it becomes pasty. The resin is dissolved in acetone as well, so that a syrupy liquid is obtained, which is mixed with the other. The pieces which are to be glued together are smeared with the cement. After a few hours the cement dries at the ordinary room temperature.

Repairing Injured Rubber Shoes by Cold Vulcanization

The cold vulcanization process may be used to good advantage in the repairing of rubber shoes which have been injured in some way. For this purpose a suitable pressure arrangement must be provided. The defective part of the rubber shoe is first cleaned thoroughly with naptha; the surrounding rubber is sandpapered and the mending patch is treated in the same way. A coating of rubber cement is then smeared on the under side of the patch as well as on the defective spot in the shoe. This is dried and moistened with the vulcanizing agent; the patch is laid on the defective spot so as to cover it exactly and pressure is applied in such a manner that every part of the patch is subjected to the same degree of compression. In about 15 minutes the repair is finished. The apparatus for carrying out this process consists of a form on which the shoe can be placed. This form also holds an iron plate which is fastened to a spring, attached to a threaded rod provided with a thumb screw. The patch is placed on the iron plate and forced up against the sole of the shoe by means of turning the thumb screw.

Poisoning with Rubber

N. A. Shepard and S. Krall have reported that they have noticed that when rubber, which contains hexmethylenetetramine, comes in contact with the skin, an inflammation or eruption is caused to take place. In hot weather, when the workers perspire freely, this effect is found to be at its maximum. It is limited entirely to those workmen who come in contact with the crude rubber. Washing the hands in a saturated solution of bicarbonate of soda is found to be a very efficient prophylaxis.

NEWS OF THE INDUSTRY

News -- Personals -- Financial -- Building Activities -- New Products

News from the Rubber Metropolis

Akron Preparing for 1922—New Management for Portage—Seiberling Rumors Unconfirmed—Miller Defers Dividend—Republic Receiver Files Report—Studebaker-Wulff Incorporates

Akron Preparing for 1922

(Special Akron Correspondence)

Akron rubber companies are preparing for an expected increase in business early in 1922. Orders are being placed for molds and other machinery to equip the large factory buildings erected during the boom period of 1919 and the first few months of 1920. With these buildings equipped, Akron will be in a position to furnish at least seventy-five per cent of the world's needs in automobile tires and other rubber goods.

Just how far this equipment will be installed during the coming winter is not indicated in the news from rubber plants, but it is known that the Goodyear Tire & Rubber Co. has placed a large order for molds and machinery and that other companies are preparing to increase capacity.

It is intimated in certain circles in Akron that the additional machinery and other equipment may be installed to provide for a big output without resorting to more than two shifts a day. The Goodyear company is the only one staying with the three eight-hour shifts a day plan of the wartime period. Most of the other companies are working two nine-hour shifts.

From present indications it would appear that rubber companies will not store millions of automobile tires during winter for the usual spring and summer rush of orders. Instead the manufacturing schedules will provide for only enough tires and tubes to fill current orders until after the first of the year. Then the big production schedules are expected to return in time to have supplies in shape to take care of increased buying for spring trade.

It is reported that tire tickets are being reduced from week to week in most factories in pursuance of this policy. No announcements of present production schedules have been made this month by Akron companies. When tire production was increasing or holding its own, these companies were using the return of normal business as one of their advertising methods. Goodyear, it is said, has practically dropped its third shift.

New Management for Portage

(Special Akron Correspondence)

The re-organization of the Portage Rubber Company, of Barberton, now in the hands of a receiver, is being worked out by the Portage stockholders protective committee. The plan includes an entire new management.

An issue of $1,000,000 in first mortgage gold bonds will be offered. The present stockholders will be given first chance to subscribe for these bonds which bear eight per cent interest.

The present common stock will be withdrawn and new common issued share for share. The new common will have no par value.

Bank, merchant creditors and fabric commitment creditors will be given a form of debenture bonds to cover their claims against the company.

The protective committee has the following members all of whom are from Ohio: E. A. Tinsman, Willoughby; Judge Thomas Turner, Canton; C. M. Howenstine, Massilon; Albert E. Allen, Canton; H. A. Rudd, Barberton; O. D. Everhard, Barberton; Harry Fife, Canton; and J. G. Firestone, Spencer.

It is expected that the plant will be in operation under the reorganized company within thirty days. E. A. Tinsman, former manager, will be general manager and vice president, it is said.

Seiberling Rumors Unconfirmed

(Special Akron Correspondence)

Reports from Youngstown, Ohio, that F. A. Seiberling, founder and former president of the Goodyear Tire & Rubber Co., was after the Republic Rubber Co. of that city, have not been confirmed at Mr. Seiberling's office in Akron. Mr. Seiberling and some of his Goodyear associates were in conference with Republic officials recently, but the subjects discussed were not made public.

Miller Defers Dividend

The board of directors of the Miller Rubber Company has deferred the dividend on the preferred stock due to be paid at this time, according to advices received in Wall Street.

William Pfeiffer, president of the company, said that "since the first of the year indebtedness has been reduced from $8,676,000 to $2,400,000, of which $1,400,000 is owing to banks. Against this the company has accounts receivable of $3,100,000, and $1,200,000 cash commitments losses have been reduced approximately $400,000."

Republic Receiver Files Report

The report of C. H. Booth receiver for the Republic Rubber Corporation was filed on August 26 before Judge Westenhaver in United States court in Cleveland, and contrary to expectations, no recommendations were made as to the disposition of the properties.

The report showed claims against the company amounting to $4,735,353.75 of which $996,088.23 is allowed by the receiver, leaving $3,739,265.52 in dispute and to be settled by the court. This amount represents the contracts for fabric materials contracted for under the high price of materials. The fact that these contracts have been made in the face of a falling market was the direct cause of the corporation being thrown into the hands of a receiver. Delivering of materials was held up on these contracts.

In contrast to the contract made for fabrics is the fact that no contracts of any consequence were made for rubber at the peak prices. It is said that the contracts made for fabrics last year were for more than half a year's supply at the very highest prices. The prices began to fall immediately afterwards and the refusal of the fabric manufacturers to compromise brought the crash.

The purchases of rubber, on the other hand, were made on the falling market and were for immediate use only. In consequence the company was able to take advantage of the falling market.

Studebaker-Wolff Incorporates

Incorporation papers for the Studebaker-Wulff Rubber Company to be established in Zanesville, Ohio, were taken out at Columbus on August 27. The incorporation is for $500,000 and the incorporators named are Peter E. Studebaker, Henry C. Buchanan, Benjamin F. Wulff, K. Stock and S. A. Zenter.

This announcement makes it a practical certainty that the Rotary Tire & Rubber company at Licking View will be taken over by the new firm.

The Rotary Tire company plant, as it stands, is completely equipped for the manufacture of both pneumatic and solid automobile tires of high quality and once the buildings are taken over it will be but a few days until actual operations in the manufacture of tires is gotten under way.

It is understood that the incorporators of the new firm have proposed a plan that will amply protect both the stockholders and the creditors of the Rotary Tire company which has for some time been in the hands of a receiver and that there will be no difficulty in securing the court's approval.

U. S. Rubber Groups Losses

The United States Rubber Co. in a statement issued to its stockholders on August 27, submits the interesting fact that it has grouped its losses occasioned by adjusted prices and market conditions. According to the statement losses for the first half year of 1921 amounted to $4,875,223. This amount is covered by reserves set aside to cover such conditions.

President C. B. Seger in a statement which appears over his signature explains the condition as follows:

"The business of this company, by reason of the commodities handled, is subject to seasonal conditions and is necessarily conducted and must be considered on a yearly basis. Therefore, the results for any period of a year are not conclusive and might readily be misleading unless consideration is given to the conditions under which the results were produced.

"In ascertaining the results for the first six months of 1921, the cost of goods sold was computed on the basis of the cost of goods carried in inventory as of the first of the year, plus the cost of the goods manufactured during the period, thus absorbing in cost any depreciation that may have occurred in inventory after the first of the year and also the higher cost of goods manufactured during the period. The cost of finished goods carried over as of the first of the year was conservative on the basis of the selling prices then prevailing, which prices it was believed would be maintained for the period of time necessary to effect the liquidation of stocks. Instead, however, it was found necessary to substantially reduce selling prices for some classes of merchandise, especially tires and mechanical goods. The effect of these price reductions was necessarily reflected in the results of sales for the first six months of this year, in addition to which there were reflected in the net results for the period the burdens of the higher cost of goods sold, as shown above.

"In addition to the effect of the reduction in sales prices and the higher manufacturing cost, consideration should be given to the matter of selling expenses. Owing to the seasonal nature of a large proportion of our business, the benefits of the sales efforts necessarly made during the first six months of the year will be favorably reflected, to a considerable extent, in the sales and profits for the last six months of the year, whereas the expenses are taken into account and charged against the income of the first six months, being the period during which they were incurred. As the result of this procedure, selling expenses for the first six months of 1921, charged to the income account for that period, include a substantial sum, representing sales efforts the benefits of which will accrue in the last six months of the year and, in some cases, subsequently.

"Computed in the manner herein before explained, the results for the first six months of 1921 show a deficit of $4,875,223 after all interest and other charges. Against this the company has reserves, heretofore created out of income to cover contingencies that might arise, sufficient to offset this deficit, but it is deemed proper to report the actual results as stated above and await the realization of the results for the last six months of the year, which we hope and believe will show substantial improvement, due largely to the liquidation of stocks effected during the first six months and the lower cost of manufacturing during the last six months of the year which will result from the reduction in price of basic raw materials, wages, and reduction of overhead made possible by increase in volume of production.

"It should be borne in mind that if the reductions in selling prices and other disadvantages referred to could have been anticipated they could have been provided for by appropriation of corporate surplus, applied to the further writing down of inventories as of December 31, 1920, in which event the final net result would be the same as will result from absorbing in the operations of 1921 the amount of shrinkage resulting from these conditions."

New Jersey Car Spring Insolvent

(Special Trenton Correspondence)

The New Jersey Car Spring & Rubber Company, of Jersey City, N. J., has been adjudicated a bankrupt in the United States District Court by Judge Rellstab in Trenton. The complainants with the amounts of claims follow: Commercial Trust Company, Jersey City, N. J., $71,000; Harriman National Bank, New York City, $50,000; Brighton Mills Company, $21,738; William Whitman Company, New York, $74,000; H. A. Astlett & Company, $6,650. It is alleged in the complaint that the liabilities of the company are $473,000 and the assets $283,000. The defendent filed with the complaint an answer admitting its insolvency.

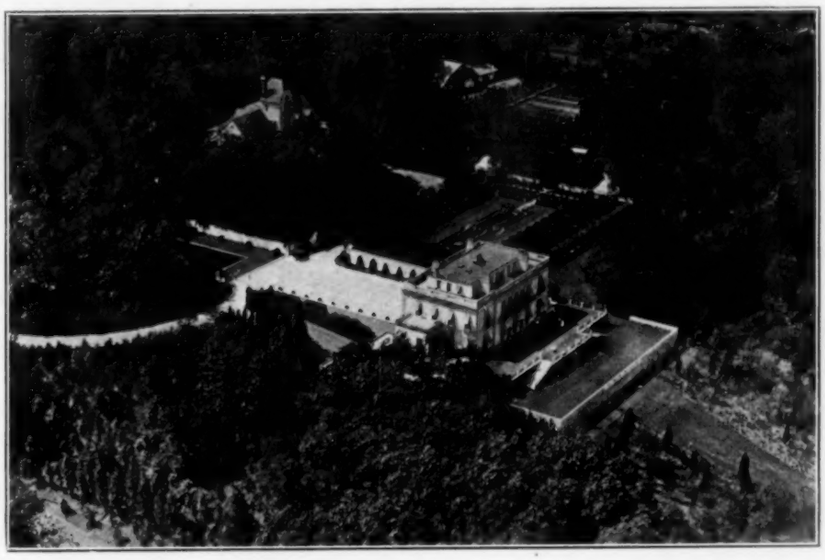
The Rubber Business in Trenton

(Special Trenton Correspondence)

The tire plants at Trenton are keeping busy and most of them are working more or less overtime. Mechanical goods lines remain dull, but most of the manufacturers believe the outlook is for better business in the fall.

The Ajax Rubber Co. is operating twenty four hours a day with three shifts. The Bergougnan Rubber Corp. has been working over-time to catch up with orders, while the Acme and Globe companies are employing night forces. The Empire Tire & Rubber Corporation report that their tire department is operating about 70 per cent, and that their moulded hose production will equal that of last year.

The Semple Rubber Co. reports increased business on their lines of tubes. The Essex Rubber Company is working to capacity and recently placed a number of additional pressmen at work. Their rubber heel and sole department is working overtime to fill orders. The Puritan Rubber Mfg. Company is operating twenty four hours a day with two shifts. The boot and shoe department of the Lambertville Rubber Company, of Lambertville is closed down because of lack of orders and their ball, band and toy departments are operating five days a week.



(Maynard Aerial Photos)

HOME OF B. G. WORK, PRESIDENT OF B. F. GOODRICH CO., AT OYSTER BAY, L. I.

Production at the Trent

(Special Trenton Correspondence)

One hundred tires per day are being made at the plant of the Trent Rubber Co., Inc., Trenton, N. J., which was purchased last June by Thomas H. Thropp, Newton A. K. Bugbee, James H. Morris, Charles Y. Barlow and Albert Rees, creditors. Mr. Thropp has been made president, Mr. Morris, vice president and Mr. Bugbee, secretary and treasurer of the new company. Production will soon be increased to 250 tires per day, it is said.

To Discuss Safety in Rubber Factories

The program for the Rubber Section of the convention of the National Safety Council to be held in the State House at Boston, Mass. September 26 to 30 inclusive, will be as follows:

First Day

1. Address of Welcome by Chairman, E. H. Fitzgerald, Federal Rubber Company, Cudahy, Wis.
2. Standard Statistics of the Rubber Industry by Ray Watson of the Goodyear Tire & Rubber Company, Akron, Ohio.
   Discussion.
3. Fire Hazards and Static Electricity, F. H. Hoxie-Associated Factory Mual Fire Insurance Company, Boston, Mass.
   Discussion.
4. General discussion on new ideas to promote safety in the rubber industry, including the conducting of safety work with a minimum expense.

Luncheon

toastmaster, Harold T. Martin, Speaker, Harvey S. Firestone, Firestone Tire & Rubber Co., Akron, Ohio.
Special entertainment also to be provided.

Second Day

1. Talk by one of the foremost rubber chemists in America.
   Subject—Safety from the Chemist's Viewpoint by Dr. Lothar E. Weber, of Boston.
   Discussion.
2. Keeping a Rubber Factory Clean—Discussion.
3. Practical Plans for Medical Supervision in Rubber Plants, Dr. R. S. Quimby, Hood Rubber Company, Watertown, Mass.
   Discussion.

Third Day

1. Reports of Committee:
   Engineering Committee—C. B. Mitchella, Goodrich Rubber Co.
   Health Hazards Committee—C. F. Horan, Hood Rubber Co., Watertown, Mass.
   Membership Committee—E. W. Beck, U. S. Tire Company, N. Y.
   Program Committee—S. M. Schott, Morgan & Wright, Detroit, Mich.
   Standards and statistics Committee—Ray N. Watson, Goodyear Tire & Rubber Company.
2. Talk by C. B. Whittelsey, president Hartford Rubber Works, Hartford, Conn.
   Subject—Safety from the Factory Manager's Viewpoint.
3. Reclaiming plants and Their Efforts Towards Safe Operation by John C. W. Baker, Master Mechanics, Rubber Regenerating Company, Naugatuck, Conn.

Gordon Resumes Operations

The plant of the Gordon Tire and Rubber Co., Canton, Ohio, which had been shut down since July 15, when A. G. Ryley and A. B. Clark were appointed receivers, has again resumed operations. It was reopened on August 22, and production scheduled at 50 per cent of capacity by September 1.

After a careful study of the plant and its equipment the receivers concluded that it could be operated at a profit. They valued real estate, buildings and machinery at $429,834.24 and current assets at $73,699.77. They asked the court for permission to issue $200,000 in receivers certificates of indebtedness to purchase materials and supplies to operate the plant.

In line with reorganization plans, the New York and Chicago branches have been discontinued. A. I. Butler, who was formerly in charge of the New York branch, and L. F. Polacheck, formerly in charge at Chicago, will remain with the company, but in the capacity of special field representatives. Mr. Butler will have charge of the eastern territory and Mr. Polacheck the western, with headquarters at New York and Chicago respectively.

Braender's Reorganization Plan

Under reorganization plans for the Braender Rubber & Tire Co., Rutherford, N. J., the new corporation will have 7,000 shares of first preferred eight per cent cumulative stock, par $100; 4,000 shares of six percent second preferred stock, par $100, and 1,000 shares of common stock, no par. All creditors, with the exception of members of the Braender family, will receive first preferred stock. Claims of wage earners amounting to $1,027 are to be paid in cash, as are all creditors holding claims of less than $100. The claims of the Government for taxes are to be liabilities of the reorganized or new company. The plan is endorsed by the creditors' committee.

Raybestos Acquires "Garco" Plant

The capital stock of the Raybestos Company of Bridgeport, Conn., was recently increased from $3,000,000 to $8,000,000 in order to acquire the stock of the General Asbestos & Rubber Co., of Charleston, S. C., and the merger of the two concerns has now been effected. The Charleston plant is equipped for spinning yarn from asbestos and the Raybestos plant are equipped for weaving and finishing this yarn. Among their principal products are sheet packing and brake lining.

Poel & Kelly Incorporate

The business of Poel & Kelly, crude rubber importers, for many years a partnership, has now been incorporated with the following officers: Frank Poel, president; William J. Kelly, vice president; Fred Pusinelli, treasurer.

L. Blitz's New Location

L. Blitz, crude rubber importer and dealer, announces the removal of his office from 25 West Broadway to the Scandanavian-American Building, 16-18 Bridge street, New York.

Culp Plan Progresses in Spite of Conditions

After six months of intensive missionary work—work involving "putting over" a novel idea in the hardest kind of hard times that ever struck the tire trade—George K. Culp, Inc., announce that their plan is in full operation with every indication of success ahead.

Every one that has tried it knows how hard and beset with how many thorns is the road from evolution of an original idea to its realization. This is the road the Culp organization has had to travel and Mr. Culp and his associates now have the satisfaction of seeing the wheels go round and all the gears in mesh just as they had confidently planned.

Readers of the RUBBER AGE will recall from our previous articles that the "Culp-Plan" is a method of marketing the surplus production of tire factories without waste and at a minimum of overhead cost. The plan was for energetic and reliable tire distributors, as many as desired, to enter into a cooperative agreement that would eliminate factory and sales expense by means of the delivery of Culp specification tires on a cost plus basis direct from factory to store without intermediate expense, the distributor at all times retaining absolute control of his own business.

The manufacturer also, like the distributor, retains control of his own business, becoming a partner of the distributor, just as the latter becomes a partner of the manufacturer.

The plan as originally outlined appealed strongly to both manufacturers and distributors, and a goodly representation of both manufacturers and distributors have now become associated under this form of contract.

Originally Mr. Culp had counted on handling only the surplus production from a number of factories, perhaps ten per cent of a factory's output. But as the plan has been worked out and elaborated, the original thought has been extended to the entire production of some factories as well as part production of others. This means that well-known and widely advertised brands of tires will be marketed by the "Culp-Plan" associated dealers, bearing the original brands of their factories with the addition of the words "Culp-Plan" branded on them. This is a distinct addition to the original merchandising idea.

Another indication of the strong appeal to the rank and file of the tire dealers contained in the "Culp-Plan" is that a large number of them during the past sixty days have become associated under the plan as the result of mail correspondence and without personal interviews. Considering the vital importance of the issues involved to any tire dealer in such a transaction, this speaks volumes for the confidence reposed in the "Culp-Plan" idea. Any dealer desiring to know more of this plan should send for a copy of the booklet entitled "The Culp-Plan" which gives full details.

Personals of the Trade

Seger Heads Board of U. S. Rubber—Goodyear Officials Visit Properties—Mid-West's New Officers—New Secretary of British Association—Spicer Heads Trenton Ad Club

Seger Heads Board of U. S. Rubber

Charles B. Seger, president of the United States Rubber Company, was elected Chairman of the Board of Directors at a meeting held September 1 succeeding the late Colonel Samuel P. Colt. He will retain the position of president. Lester Leland was elected Assistant-Chairman of the board.

On January 1, 1919, Mr. Seger joined the United States Rubber Company as its president. Previous to that he was president of the Union Pacific Railroad, being elected in March, 1918. He is also a director of the United States Mortgage and Trust Company, the Western Union Telegraph Company, International Acceptance Bank, Union Pacific Railroad, Oregon Short Line Railroad and Oregon, Washington Railroad and Navigation Company.

On August 29 Mr. Seger celebrated his fifty-fourth birthday. He was in the railroad business for thirty-six years bebore becoming president of the United States Rubber Company.

Goodyear Officials Visit Properties

President E. G. Wilmer and Vice President P. W. Litchfield of the Goodyear Tire & Rubber Co., Akron, Ohio, left the middle of August for a visit to the Canadian plant at Toronto, the California plant at Los Angeles and the cotton plantation at Phoenix, Arizona. They will be gone about four weeks.

L. C. Rockhill, general sales manager and W. S. Wolfe, development manager, will join them at Los Angeles.

The Mid-West's New Officers

The choice of William W. Wuchter of Omaha, Neb. as president of the Mid-West Rubber Manufacturers Association was a fitting recognition of the work he has done for the organization since its inception early in 1919. He was one of the group of Western manufacturers who were active in bringing about its formation in the belief that those in the West needed a point of contact at Chicago and an association that would serve their particular needs. He was elected a Director at the first annual meeting, and has served successively as secretary, second vice president and first vice president. He has a wide circle of acquaintances and is exceedingly popular throughout the trade. Under his leadership and with the able assistance of General Manager Matthews, the Mid-West monthly meetings may be expected to attract ever increasing numbers.

Mr. Wuchter received his training in tire manufacturing at the Goodrich and Firestone plants at Akron where he went through all the degrees in the production end and served for a number of years in managerial capacities. He is universally regarded as one of the best informed men as regards the technique of tire manufacturing in the industry.

Sam J. Turnes, who was recently elected treasurer of the Mid-West Rubber Manufacturers' Association, has been general sales manager of the tire division of the Brunswick-Balke-Collender Co., Chicago, since August 1, 1919. During the past two years he has been engaged in the important work of building up a sales and dealer organization in conjunction with the Brunswick branches in the large cities throughout the United States.

SAM J. TURNES

He went with the Brunswick-Balke-Collender organization in April, 1918, as advertising manager and after serving for a year in this capacity was placed in charge of the sales promotion work in their tire division from which position he was promoted to General Sales Manager.

Previous to his entering the tire business he was engaged as sales and advertising manager in the wholesale and retail piano and phonograph business. For several years he was a director of the Advertising Association of Chicago and is a member of the Illinois Athletic Club.

Death of O. J. Woodward

Orrin J. Woodward, for 17 years connected with the Diamond Rubber Co., at Akron died in a sanatarium at Baltimore, Md. on August 18. He was in charge of the Diamond solid tire sales for many years. During the past nine years he has been in the automobile business at Chicago.

New Secretary of British Association

Brig. Gen. R. T. Pelly, C. B., C. M. G., D. S. O., has been elected secretary of the India Rubber Manufacturers Association of Great Britain to succeed the late W. G. Wilson. Born in 1881 and educated at Haileybury College, he served in the South African war in 1899 and remained in the army until 1912 when he became a chief cost accountant at Toronto, Canada. In 1914 he went to France as major in Princess Patricia's Canadian Light Infantry. In 1917 he was promoted to the rank of brigadier general.

Spicer Heads Trenton Ad Club

The Trenton Advertising Club has been in existence less than four months, but has already enlisted the interest and support of many sales managers and advertising men from the big industrial plants in Trenton, N. J. Credit for bringing this live commercial organization into existence is to be given in large measure to John T. Spicer, well-known in the rubber industry as the general sales manager of the Thermoid Rubber Co., who was elected president of the Club at the first meeting on May 25 last. George Basil Hooper was elected vice president and Pierce Schulz of the Hibbert Printing Co., secretary and treasurer. The officers together with Herman Daiber, George Hawkyard and William Schweiger constitute the board of governors.

Other members of the rubber industry in the club are: Elwood Lee of the Acme Rubber Mfg. Co.; J. Connelly of the United & Globe Rubber Co.; E. P. Weber, General Sales Manager of the Bergougnan Rubber Corporation; R. B. Magee, Bergougnan Rubber Corporation; C. A. Charles, Thermoid Rubber Co.; Ira Worthington, Trent Rubber Co., and W. B. Craig, formerly of the Globe Rubber Tire Manufacturing Co.

Two well attended meetings have already been held since organization. On June 1 Prof. Stuart Mims of the J. Walter Thompson Advertising Agency of New York spoke on "The Economics of Advertising," and on July 20 Percy Atkinson of the Cosmopolitan magazine, New York, addressed the club on different phases of advertising. The next meeting will be held on September 21 for which an interesting program has been prepared.

The club's outline of study for the coming fall and winter includes "The Theoretical and Practical Aspects of Advertising", "Newspaper, Magazine and Trade Paper Advertising", "Out-door Advertising, Both Poster and Bill-board", "Planning a Campaign", "Media, the Why and Selection of Each", "Copy, Layout, Type, Art-work and Press-work".

Thomas H. Burton Dies

Thomas H. Burton, assistant treasurer of the Hood Rubber Co., Watertown, Mass. died at his home in Cambridge August 22, aged 40 years. He had been assistant secretary of the State Street Trust Co., Boston.

Sandusky Building Postponed

The Ajax Rubber Co. has requested the Chamber of Commerce of Sandusky, Ohio, to extend the time for the erection of the proposed Ajax factory in Sandusky one year. Chairman Horace De-Lisser of the board of directors of the Ajax Rubber Co. in his letter to the Sandusky Chamber of Commerce pointed out that present business conditions did not justify the erection of the factory this year.

In his letter Mr. De Lisser remarked: "I am just as optimistic concerning the automobile and its accessories as I have always been, and even more so now, from the fact that while production has been very much curtailed for almost a year past, consumption has been almost continual. It is true that 'while the grass is growing the horse may be getting hungry', but he will have hay before he starves to death."

On December 19, 1919 the Ajax Rubber Co. and the Sandusky Chamber of Commerce entered into a contract by which 90¼ acres of land would be deeded to the rubber company upon condition that the latter erected and placed in operation within 18 months a rubber factory with a minimum capacity of 2,500 casings per day affording employment to not less than 1,000 employees.

Hood Business in 1921

Sales of the Hood Rubber Co. for the first six months of 1921 were nearly equal to those for the first half of 1919, but $5,000,000 behind the record figures for the same period of 1920. Based on the manner in which sales and output have been climbing, the management expects to do a business for the full year of approximately $26,000,000, as compared with $25,000,000 in 1919 and $33,000,000 in 1920. In making this estimate, it is pointed out that 1921 selling prices are considerably under those existing in 1920.

The tire department is running at capacity.

New Receivers for British American

Planning to rehabilitate the bankrupt British-American Mfg. Co., of Springdale, Conn., Frank E. Malone of New York and Thomas B. Coughlin of Springdale have been appointed receivers in place of the three original receivers Ed. Maurer, Fred Stern and Louis C. Hasell. Previous to its failure this company had developed a large business in rubberized fabrics.

Akron Balloon in International Race

W. T. Van Orman and Willard Seiberling, pilot and aide respectively of the balloon "City of Akron", which is entered in the international balloon race at Brussels, Belgium, September 18, left Akron, August 24 and sailed from New York on the *Finland* August 27—the same boat that carried the balloon.

Both aeronauts are with the Goodyear Tire & Rubber Co. at Akron, Willard Seiberling being a son of Frank A. Seiberling, former president of that company.

A committee of Akron men, interested in aviation of which W. C. Young of the aeronautical department of the Goodyear Tire and Rubber Co., was chairman and Hugh Allen also of the Goodyear Tire & Rubber Co., treasurer, raised the $2,500 necessary to send the two men and the balloon to Europe.

Hanna Representing Cleveland

The Cleveland Rubber Corporation Co., of Cleveland, Ohio, have opened headquarters at 2142 Broadway, Lorain, Ohio, to cover the five counties in that section

Gus H. Hanna

for Cleveland cords with Gus H. Hanna as district manager. Mr. Hanna served as street commissioner of the city of Cleveland under both Mayors Tom Johnson and Newton D. Baker, in all about 14 years. He was one of the first promoters of the so-called "wet" system of street cleaning, and holds several patents on street flushing machines. He is first vice president of the Society of Street Cleaning and Refuse Disposal of the United States and Canada.

The Lorain store is in the recently completed White Truck Building.

Plan for the Marion Plant to Resume

J. D. Dice, of Akron, Ohio, has submitted a plan to the stockholders and creditors of the bankrupt Marion Tire & Rubber Co., of Marion, Ohio, by which the plant would resume operations. Final decision will be made on September 16 on proposals for reorganization. October 3 has been set as a tentative date for the sale of the property of D. D. Grindle, referee in bankruptcy, of Lima, Ohio, if no plan of reorganization is decided on.

Greenwell Passes Away

Lawrence S. Greenwell, manager of the planning department of the National India Rubber Co., Bristol, R. I., died August 8, aged 23 years.

Changes at Kansas City Tire Plant

The Rubber Products Manufacturing Corporation, Kansas City, Kas. has been organized to operate the Kansas City Tire and Rubber Company, for the last two years operated under lease by the A. J. Stephens Rubber Company, which latter company will continue to distribute the output of the plant.

P. E. Werner, founder and former owner of the Werner Publishing house, of Akron, O., will head the corporation as president. C. A. Knutson is secretary-treasurer. The plant is employing three hundred people and working two shifts, is producing daily 650 tires and 800 tubes.

The move marks the retirement of the A. J. Stephens Rubber Company from the actual operation of tire factories, though the Stephens interests, through the new Stephens Tires Stores Company, is contracting for the output of several tire factories.

Distinct from the tire business and the new chain of stores is the A. J. Stephens Rubber Company's accessory factory at Kansas City at which blow-out patches, fan belts, etc. are manufactured.

Personals

Charles C. Gates, president of the Gates Rubber Co., Denver Colorado, entertained at luncheon on the roof garden of the factory 180 Colorado merchants and their wives who were visiting at Denver.

P. E. H. Leroy has been made assistant treasurer of the Goodyear Tire & Rubber Co., Akron, and H. D. Hoskins and A. J. Blanchet assistant comptrollers of the company.

H. D. Hoskin, manager of the factory accounting department of the Goodyear Tire & Rubber Co., Akron, Ohio, has been made an assistant comptroller.

George L. Morse has been promoted from assistant auditor to auditor of the Mason Tire & Rubber Co., Kent, Ohio.

William A. Cluff, secretary of the Mason Tire & Rubber Co., Kent, Ohio, has been appointed a member of the Board of Trustees of the State Normal College at Kent.

Otto Meyer, president of Meyer & Brown, Inc., crude rubber importers of 347 Madison Avenue, New York, sailed on the steamship Olympic on September 3 for a European trip. He will visit the rubber centers and be gone a month or six weeks.

Andrew H. Brown, vice-president and treasurer of Meyer & Brown, returned on the steamship Aquatania on September 10 from a two months European trip on which he visited London, Amsterdam, Antwerp, Brussels and Paris. He was accompanied by his wife and son.

Ford Production Reaches Peak

For three months ended July 31 the Ford Motor Co., Detroit produced 317,587 passenger cars and trucks, an average of nearly 106,000 a month. This was the biggest output for any three months period in the company's history.

New Officers of Beacon Falls

The plan by which the United States Rubber Co. offered to take over the management of the Beacon Falls Rubber Shoe Co., of Beacon Falls, Conn., for a term of five years in the event of the latter company fulfilling certain conditions, as published in the June 25th issue of THE RUBBER AGE, was declared operative by the United States Rubber Co., last July and the plant is now being operated in accordance therewith.

Frank E. Church, formerly manager of the United States Rubber Co.'s branch at St. Paul, Minn., has been elected president of the company to succeed the late Tracy S. Lewis. Lewis C. Warner remains as vice-president and secretary. Fred Strong from the United States Rubber Co.'s organization has been elected treasurer, and E. S. Andrews assistant treasurer.

Besides the plant at Beacon Falls the company operates the plant at College Point, L. I., which was established about six years ago.

Collette Now with Lambert

Guy M. Collette on September 1 became general manager of the Lambert Tire & Rubber Company of Akron, succeeding John Hausam. Mr. Hausam retired to look after other business interests. He continues as a director of the company.

Mr. Collette has had experience in the manufacturing, selling and advertising departments of the rubber industry. He was for several years with the Diamond Rubber Company and is well-known in the Akron district as chief clerk in the Firestone advertising department. Prior to going to the Lambert he was with the Whitman & Barnes Manufacturing Company of Akron.

Adna D. Warner Passes Away

Adna D. Warner, aged sixty-two years, general manager of the Mishawaka Woolen Manufacturing Co., Mishawaka, Ind., died at his home in that city on July 24 last from an attack of acute indigestion. The remains were brought to his former home at Naugatuck, Conn., for interment.

Mr. Warner was generally regarded as one of the best informed men in the industry in the manufacture of rubber footwear. He had been connected with the Mishawaka plant for the past seventeen years during which time it has grown into one of the largest footwear plants in the country.

He was born at Pitcher, Chenango Co., New York, on July 22, 1859, and when a young man went to work in the plant of the Goodyear's Metallic Rubber Shoe Co., at Naugatuck, Conn., where he learned all branches of rubber footwear manufacture. For a time he was with the Naugatuck Malleable Iron Co., and then returned to the Metallic Shoe Co., where he became associated with the late George A. Lewis, who was at that time president and treasurer of the company, and E. A. Saunders who was general superintendent. This was an association destined to continue for the rest of his life.

About 1896 Mr. Saunders left the Metallic Rubber Shoe plant and soon after bought the Mishawaka Woolen Mfg. Co.'s plant at Mishawaka, Ind., and began making rubber footwear there. Mr. Warner then became general superintendent of the Naugatuck plant, which at that time also included the factory now operated by the Rubber Regenerating Co. at Naugatuck. He remained in this position until 1899 when he in company with George A. Lewis and Lewis C.

ADNA D. WARNER

Warner established the Beacon Falls Rubber Shoe Co., at Beacon Falls taking over an idle cotton factory for the purpose. George A. Lewis became president and treasurer of the new concern, A. D. Warner, vice president and general manager, Tracy S. Lewis, secretary and Lewis C. Warner, who was a brother-in-law and cousin of A. D. Warner, superintendent of the plant.

In 1904 he again became associated with Mr. Saunders going to Mishawaka as general manager of the company, a position he occupied until his death. Both the Beacon Falls and Mishawaka plants through the wise management of Mr. Warner and the group of men with whom he was so long associated prospered and grew to good size. Besides his connection with the rubber industry Mr. Warner was president of the North Side Bank in Mishawaka and a director of the Mishawaka Savings and Trust Co. He leaves a widow, an adopted son, Karl Warner of Mishawaka, and a stepdaughter, Dorothy Warner of California.

New Detroit Tire Factory

The New Departure Tire & Rubber Co., Detroit, Mich., has been organized for the manufacture of cord casings only, and will be in production this fall.

Georgia Firms Consolidate

Announcement of the reorganization of the Victory Rubber Manufacturing Company, Atlanta, Ga., was made recently. The reorganization included consolidation with the Cotton States Rubber Manufacturing Company, and a general enlargement of the output of numerous rubber products.

The new officers of the Victory Rubber Manufacturing Company are: G. J. Reuter, president and general manager; S. S. Shepard, treasurer, with Dr. W. P. Glover, A. L. Waldo and W. J. Burke as additional directors.

The absorbed Cotton States Company manufactured repair stocks, mats, aisle runners, rubber heels, plumbing supplies, steam packing and other lines. These commodities will be added to the already large business which the Victory company has built up on its Sealtyte tubes.

Goodyear Announces Appointments

(Special Akron Correspondence)

Several changes in the personnel of the Goodyear Tire & Rubber Co. have been announced. H. R. Hoskin, accounting department manager, has been named assistant-comptroller. A. J. Blanchet also has been made an assistant-comptroller and P. E. H. Leroy, manager of the foreign finance department, has been named assistant-treasurer.

Good Business at Seamless

President Fred Williams of the Seamless Rubber Co., New Haven, Conn. reports that 1,100 employes are at work in their plant which has been operated on full time since July. New employes are being added weekly. They manufacture druggists' sundries for the United Drug Co.

"Prepare For a Boom"

"Prepare for a Boom" is the title of a handsome booklet issued by the Hart Roller Bearing Co., of Orange, N. J., manufacturers of the Hart Staggered roller bearings. The writer has taken for his text the remark of a banker that the time to prepare for a boom was in times of business depression, and points out that the present is a favorable opportunity for manufacturers to revitalize their plants, machinery and equipment. A detailed description is given of the Hart Staggered roller bearings.

Rubber Exhibits at Trenton Fair

Several Trenton rubber manufacturers have taken space for exhibits at the Trenton Inter-State Fair which will be held September 26 to October 1. These include the Acme Rubber Mfg. Co., the Thermoid Rubber Co., the Semple Rubber Co., and the United & Globe Rubber Co. The rubber industry is represented on the Directorate of the Inter-State Fair Association by John S. Broughton, president of the United & Globe Rubber Co., and Gen. C. Edward Murray, president of the Crescent Insulated Wire & Cable Co.

MARKETS

Manufactured Rubber Goods

NEW YORK, SEPTEMBER 7, 1921

With the exception of the tire manufacturing branch of the rubber industry there were few noteworthy developments in the rubber business during the month of August. The manufacture of tires was speeded up during that period and a number of firms attained a production which equalled the peak figures of 1920. During the last few weeks, however, tire manufacturing has slumped somewhat. Production schedules are being cut down and the output of tires has accordingly diminished in direct ratio. This, it is said, is to be regarded as nothing unusual but is merely occasioned by the general lack of demand felt at this season.

Business in rubber footwear has been fairly brisk considering the season. Retailers are coming into the market and are making inquiries which in many instances have developed into sizeable orders. It will be remembered that owing to the light winter of 1920-1921 a great majority of the retailers throughout the country have large stocks of footwear upon their hands which will have the effect of retarding production.

With respect to mechanical goods the market still hangs fire. The railroads are not buying save where it is absolutely necessary. Railroad equipment throughout the country is, generally speaking, badly in need of repair and it is only a question of time before these important factors in the market will be forced to purchase mechanical goods. The coming of this day is being awaited by the manufacturers but at the present writing it is difficult to predict when it will arrive.

Little has taken place in the rubber clothing field since our last report although the feeling of optimism among the manufacturers seems to be on the increase.

Manufacturing activity in the field of druggists' sundries slumped somewhat during the month of August but recently business has picked up to a considerable extent. Water bottles and other goods of like nature are more in demand than formerly and the demand will undoubtedly increase with the coming of the cold weather. The demand for bathing caps is over and it will not be long before tennis balls and golf balls will be upon the wane. Generally speaking buying seems to be of a spot nature and depends more upon the immediate wants of the buyer than his opinion of what may be needed in the future.

Cottons, Yarns and Fabrics

NEW YORK, SEPTEMBER 3, 1921

Not since cotton records have been kept has there ever been any August crop condition so sensationally low as that reported by the government September 1. The condition of the growing crop on August 25 as reported by the Bureau of Markets and Crop Estimates was 49.3 per cent of normal as compared with 67.5 August, 1920, and a 10 year August average of 67.7.

The estimated total production is 7,037,000 bales against last year's production of 13,439,603 bales. The reduction was beyond all expectations and immediately upon the announcement the market advanced $5.00 a bale over the previous day's close. The yield per acre showed only 127 pounds, the smallest in the records of fifty-one years.

Cottons, yarns and fabrics which had been firm in the middle of the month advanced rapidly as the raw cotton prices rose during the last week of August and following the announcement of the government report the market for cotton goods became unsettled. Selling agents asked full prices for stock goods and in many instances refused to quote for future delivery. Many agents and manufacturers withdrew all prices to await a more stable situation.

EGYPTIAN COTTON

The following official figures of the acreage under cotton throughout Egypt, divided according to provinces, have been given out by the Ministry of Agriculture.

Lower Egypt—	Acres.	Upper Egypt—	Acres.
Behera	198,318	Guiza	25,178
Gharbieh	349,332	Beni Souef	58,650
Dakahlia	173,908	Fayoum	87,859
Sharkieh	163,947	Minia	87,146
Manoufieh	106,285	Assiaut	27,809
Kalioubieh	53,357	Guirgua	379
		Kena	2,636
Total	1,045,147	Assouan	250
		Total	289,907
Grand Total			1,335,054

While the crop is expected to be large in spite of reduced acreage the quality will be low. It is estimated that the 1921-22 cotton season, allowing for about 300,000,000 pounds carry over, should open with not less than 700,000,000 pounds.

DRILLS, SHEETINGS, and OSNABURGS

Sheetings followed the advance in the raw cotton market and was active and strong at high prices. 40-inch 3.60 had moved upward from 7¾c to 10c and other constructions showed large gains. When the August cotton condition report was announced many houses withdrew all offerings and others withdrew all lines on which they are sold ahead for 60 days.

The market for drills continues strong but dull. Price quotations have been considerably advanced during the fortnight but stock is scarce at the mills. It is said that the mills have been busy during the last several months on 3-yard sheetings for export to China and the Levant, some 15,000,000 yards, and drills have been neglected.

BURLAPS

The burlap market for the two weeks period showed improved sentiment with decided rise in values. The advance was due more to the continued rise in exchange rather than any active buying. There were reports of sales of 7½ ounce 40-inch at 3.60. For 8-ounce, 3.65 was possible and the 10½ ounce called for 4.75.

Current quotations on the various fabrics used in the rubber industry are as follows:

TIRE FABRICS (Square Woven)			
17¼-ounce Sea Island, combed, lb.	.85	@	.90
17¼-ounce Egyptian uppers, combed, lb.	.67	@	.70
17¼-ounce Egyptian uppers, carded, lb.	.63	@	.65
17¼-ounce Sakellarides, combed lb.	.73	@	.75
17¼-ounce Sakellarides, carded, lb.	.65	@	.68
17¼-ounce Peelers, combed, lb.	.70	@	.75
17¼-ounce Peelers, carded, lb.	.50	@	.52
CORD FABRICS			
Combed Sakellarides lb.	.78	@	.80
Carded Sakellarides lb.	.73	@	—
Combed Peeler lb.	.67	@	—
Carded Peeler lb.	.57	@	—
Carded Arizona lb.	**.70**	**@**	**.75**
Combed Egyptian uppers lb.	.70	@	—
Carded Egyptian uppers lb.	.68	@	.70
DUCKS			
Belting (pound basis) lb.	**.25**	**@**	**—**
Hose (pound basis) lb.	**.25**	**@**	**.26**
*Enameling lb.	.25	@	.30
Shoe Ducks lb.	.28	@	.30
Single filling yd.	**.10**	**@**	**.13½**
Double filling yd.	**.13**	**@**	**.14**
*Price varies according to width.			
DRILLS			
37-inch 3.25-yard yd.	.08¾	@	—
37-inch 2.75-yard yd.	.10½	@	.11
37-inch 3.00-yard yd.	.09	@	.09¼
37-inch 3.50-yard yd.	.08½	@	—
37-inch 3.95-yard yd.	.08½	@	—
OSNABURGS			
30-inch 7-ounce	.08½	@	.09
40-inch 7-ounce	.09½	@	.09¾
SHEETINGS			
40-inch 2.50-yard yd.	.11¼	@	.11½
40-inch 2.85-yard yd.	.10¼	@	—
40-inch 3.15-yard yd.	.11¼	@	.11¾
40-inch 3.60-yard yd.	.10	@	.10¾
40-inch 3.75-yard yd.	.08¾	@	—
40-inch 4.25-yard yd.	.07	@	.07½
BURLAPS (Carload Lots)			
7 -ounce 40-inch yd.	3.50	@	3.55
7½-ounce 40-inch	3.50	@	3.60
7¾-ounce 45-inch	3.60	@	3.65
10 -ounce 40-inch	3.65	@	—
10 -ounce 36-inch	4.35	@	—
8 -ounce 40-inch	3.65	@	—
10 -ounce 45-inch	5.60	@	—
10½-ounce 40-inch	4.75	@	—

Chemicals and Compounding Materials

THE GENERAL MARKET—NEW YORK—SEPTEMBER 6—There is every indication that a fairly stable price basis has been reached. The market has been remarkably firm all summer and while there were no large operations, and some soft spots resulting from foreign competition, there was a gradual broadening tendency. Holders did not show a disposition to shade prices and a very material increase in inquiry was noted. With quotations at the present low figures, many items admittedly selling below production cost, there is a general feeling that prices will firm up this month and show further tendency toward the better times that prevail in other markets.

ACCELERATORS

Organic

Aldehyde ammonia, crystals	lb.	$ .95 @	1.00
Aniline oil, bulk basis,	lb.	.20 @	—
Excellerex,	lb.	.55 @	.65
Formaldehyde-aniline	lb.	.55 @	.60
Hexamethylene-tetramine (powdered)	lb.	.95 @	1.00
Paraphenylene-diamine	lb.	— @	—
Thiocarbanilid	lb.	.45 @	.65
Vulcocene	lb.	.35 @	..

Inorganic

Lead, dry red, bbls.	lb.	.10 @	—
Lead, sublimed white	lb.	.07¼ @	.07½
white, basic carbonate	lb.	.07½ @	.08
Litharge, commercial, bbls.	lb.	.07½ @	.07¾
Lime, hydrated	lb.	.02½ @	—
Magnesium, calcined, extra light	lb.	.50 @	—
heavy	lb.	.06 @	.07
Magnesite, powdered	ton	50.00 @	65.00

COLORS

Blacks

Bone, powdered	lb.	.06½ @	.08½
Carbon black	lb.	.10½ @	.20
Drop	lb.	.07½ @	.16
Ivory	lb.	.15 @	.45
Lampblack	lb.	.17 @	.45

Blues

Prussian	lb.	.50 @	.60
Ultramarine	lb.	.10 @	.35
Cobalt	lb.	.25 @	.30
Rubber maker's blue	lb.	3.50 @	..

Browns

Iron oxide	lb.	.04 @	.06
Sienna, Italian, raw and burnt	lb.	.06 @	.12
Umber, Turkey, raw and burnt	lb.	.03¾ @	.04¾

Greens

Chrome, light, c. p.	lb.	.32 @	.34
medium	lb.	.34 @	.39
dark	lb.	.43 @	.47
oxide	lb.	.55 @	.65

Reds

Antimony, crimson	lb.	.40 @	.51
golden	lb.	.25 @	.30
red	lb.	.25 @	.28
Indian, pure,	lb.	.12 @	.17
oxide, copperas, pure	lb.	.13½ @	.15½
reduced	lb.	.11½ @	.12½
Para toner	100 lb.	1.40 @	—
Toluidine toner	lb.	2.75 @	3.10
Tuscan	lb.	.17½ @	.30
Venetian	lb.	.03½ @	.06½
Vermillion, English, quicksilver	lb.	.80 @	.85
domestic	lb.	.25 @	.30

Whites

Albalith	lb.	.06 @	—
Aluminum bronze	lb.	.60 @	.65
Lithopone, Beckton white	lb.	.06 @	.06½
Lithopone, domestic (factory)	lb.	.06 @	.06½
Zinc oxide, American Horse Head Special	lb.	.08 @	.08½
XX red	lb.	.07½ @	.08
Zinc oxide, French process, White seal	lb.	.11 @	.11¼
Green seal	lb.	.09¾ @	.10½
Red seal	lb.	.08¾ @	.09¼

Yellows

Cadmium sulphide	lb.	1.10 @	1.35
Chrome, light, c. p.	lb.	.20 @	.21
dark	lb.	.20 @	.21
medium	lb.	.20 @	.21
Ocher, French	lb.	.03½ @	.04
domestic strong	lb.	.03 @	.05
Zinc chromate	lb.	.37 @	—

COMPOUNDING INGREDIENTS

Aluminum flake	ton	25.00 @	35.00
hydrate	ton	22.00 @	25.00
Ammonium carbonate, powdered	lb.	.06 @	.09
Barium dust	ton	100.00 @	—
Barytes, Southern off-color, f.o.b. mills	ton	15.00 @	17.00
Western, prime white, f.o.b. mills	ton	23.00 @	—
Basofor	lb.	.04½ @	—
Beta-naphtol, technical	lb.	.33 @	—
Blanc fixe, dry, f.o.b.works	lb.	.04¼ @	—
Chalk, precipitated, extra light	lb.	.03½ @	.04¼
heavy	lb.	.02½ @	.03¼
Clay, China, domestic,	ton	7.50 @	9.00
imported	ton	16.00 @	24.00
Dixie	ton	22.00 @	35.00
Blue Ridge	ton	22.00 @	35.00
Fuller's Earth, powdered	ton	22.00 @	25.00
Fossil flour	ton	60.00 @	..
Glues, extra white	lb.	.30 @	.40
medium white	lb.	.24 @	.30
cabinet	lb.	.20 @	.35
cabinet low grade	lb.	.16 @	.18
common bone	lb.	.10 @	.16
Graphite flake, bbls.	lb.	.14 @	.20
powdered	lb.	.04 @	.10
Ground glass, fine	lb.	.03½ @	.04
Infusorial earth, powdered	ton	60.00 @	—
bolted	ton	65.00 @	—
Liquid rubber	lb.	.15 @	—
Rotten Stone	lb.	.02½ @	.04½
Silica (aluminum)	ton	25.00 @	30.00
Soapstone, powdered	ton	15.00 @	20.00
Starch, powdered corn	cwt.	2.33 @	—
Talc, domestic	ton	18.00 @	20.00
French	ton	22.50 @	30.00
French, high grade	ton	40.00 @	45.00
Italian	ton	40.00 @	45.00
Terra Alba, American No. 1	cwt.	1.85 @	2.00
American No. 2	cwt.	1.25 @	..
Tripoli	ton	25.00 @	—
Whiting, domestic	cwt.	.75 @	.80
Quaker	ton	13.00 @	15.00
English chalk, commercial	cwt.	1.10 @	1.20
glider's bolted	cwt.	1.20 @	1.35
Paris white	ton	35.00 @	—
Zinc Oxide— 5 per cent leaded		.07¼ @	.07¾
10 per cent lead sulphate	lb.	.07 @	.07½
20 per cent lead sulphate	lb.	.07 @	.07½
35 per cent lead sulphate	lb.	.07 @	.07½

MINERAL RUBBER

Gilsonite	ton	70.00 @	—
Genasco (c. l. factory)	ton	50.00 @	—
(l. c. l. factory)	ton	52.00 @	—
Hard hydrocarbon	ton	35.00 @	45.00
Soft hydrocarbon	ton	35.00 @	40.00
M. R. X.	ton	— @	—
Pioneer (c.l. factory	ton	46.00 @	—
(l.c.l. factory)	ton	48.00 @	—
Raven M. R.	ton	— @	—
320 M. P. hydrocarbon (c. l. factory)	ton	50.00 @	55.00
(l. c. l. factory)	ton	57.50 @	—
300/310 M. P. hydrocarbon (c. l. factory)	ton	40.00 @	—
(l. c. l. factory	ton	45.00 @	—
Synpro, granulated, M. R. (factory)	ton	69.50 @	75.00

SOFTENERS

Acids

Acetic, 28 per cent	cwt.	2.50 @	3.00
Carbolic (phenol)	lb.	.09½ @	.16
Cresylic, 97 to 99 p. c. pale	gal.	.65 @	.70
Muriatic, 20 degrees	cwt.	1.20 @	1.75
Nitric, 36 degrees	cwt.	5.50 @	6.00
Sulphuric, 66 degrees	ton	18.00 @	20.00
60 degrees, bulk	ton	11.00 @	12.00
Tartaric, crystals	lb.	.35 @	—

Alkalies

Caustic soda, 76 p.c.	cwt.	3.90 @	4.00
Soda ash, 58 p.c.	cwt.	2.15 @	2.25

Oils

Castor, No. 3, bbls.	lb.	.09 @	.09½
Corn, crude, bbls.	lb.	.08½ @	.09
refined	lb.	.10 @	.10½
Chinawood, bbls.	lb.	.16 @	.17
Cottonseed,	lb.	.08½ @	.09
Glycerine, c.p. drums	lb.	.14 @	.14½
Linseed, carload spot	gal.	.74 @	.75
bbls.	gal.	.78 @	—
Palm, Niger	lb.	.05¾ @	.06
Lagos	lb.	.07 @	.07¼
Peanut, domestic crude	lb.	.07¼ @	.07½
Pine, steam distilled, over 930° sp. gr.	gal.	1.30 @	—
Rapeseed, refined	gal.	.88 @	.90
blown	gal.	.95 @	1.00
Rosin, first rectified	gal.	.37 @	—
second rectified	gal.	.39 @	—
Tar, commercial	gal.	.31½ @	—
Soya Bean, crude, bbls.	lb.	.08½ @	.09

Resins and Pitches

Cantella gum	lb.	.50 @	..
Cumar resin	lb.	.09 @	.13
Tar, retort	bbl.	12.00 @	—
kiln burned	bbl.	11.50 @	12.00
Pitch, Burgundy	lb.	.05 @	.06
coal tar	ton	20.00 @	—
rosin	bbl.	6.50 @	—
Rosin, grade B. ex-yard	bbl.	5.25 @	—
grade K	bbl.	5.55 @	—
Shellac, fine orange	lb.	.90 @	—

Solvents

Acetone, drums, c.p.	lb.	.12½ @	.13
Alcohol, denatured, No. 1	gal.	.35 @	.38
Methyl, 95 per cent, drums	gal.	.60 @	.63
Ethyl, 190 proof, bbls.	gal.	4.70 @	4.80
Benzol, 90 per cent	lb.	.25 @	.38
pure	lb.	.27 @	.40
Carbon bisulphide,	lb.	.06 @	.07½
tetrachloride	lb.	.10 @	.12
Dimethylaniline	lb.	.45 @	.64
Naptha, motor gasoline, steel bbls.	gal.	.24 @	—
68 to 70 degrees	gal.	— @	—
73 to 76 degrees	gal.	— @	—
Taluol, pure drums	gal.	.27 @	.32
Turpentine, spirits	gal.	.62½ @	—
wood	gal.	.59½ @	—
Xylol, pure	gal.	.40 @	.43
commercial	gal.	.28 @	.35

Waxes

Beeswax white, pure	lb.	.35 @	.38
Carnauba, No. 1	lb.	.47 @	.48
Ceresin, white	lb.	.09 @	.10
Bayberry	lb.	.20 @	.21
Montan, crude	lb.	.07 @	—
Ozokerite, hard, pure	lb.	.30 @	.31
Paraffin,	lb.	.03½ @	.08
Petrolatum, amber, bbls.	lb.	.05 @	.05½
dark amber,	lb.	.04½ @	—

SUBSTITUTES

Black	lb.	.08 @	.14
White	lb.	.09 @	.16
Brown	lb.	.11 @	.15
Brown factice	lb.	.07 @	.15
White factice	lb.	.08½ @	.17
Paragol, soft and medium	cwt.	6.81 @	—
hard	cwt.	6.81 @	—

VULCANIZING INGREDIENTS

Lead, black hyposulphite (black hypo)	lb.	.40 @	—
Orange mineral, domestic	lb.	.11¾ @	.13½
Sulphur chloride (jugs)	lb.	.20 @	—
Sulphur flour Brooklyn brand (c.l.)	cwt.	— @	—
Brooklyn brand (l.c.l.)	cwt.	— @	—
Bergenport (c.l.)	cwt.	2.55 @	—
pure soft	cwt.	2.30 @	—
superfine (c.l.)	cwt.	— @	—

Carbon Tetrachloride—Makers are maintaining prices at 10 and 12 cents per pound in carlots and less. At 10 cents however it is doubtful if any considerable quantity could be obtained.

Litharge—An easy undertone prevails in the market as the consumers demand for this commodity has slacked off considerably the last few weeks.

Aniline Oil—Somewhat better demand is noted in some quarters but the market is generally dull. Sales are being made by makers at 19 cents per pound and in some instances 20 cents is quoted.

Lithopone—The announcement made the latter part of the month of a cut of 1 cent a pound in this material created much interest in the trade. As a result of this reduction German Lithopone has been offered as low as .05¼ cents. The domestic brand in car lots of bags calls for 6 cents with the usual ¼ cent above this for barrel material.

Linseed Oil—This product eased off during the last week of August when there was a decided lack of interest. European and domestic oils continue about 10 cents apart. Carlots call for 74 and 75 cents.

Soda Ash—Light ash in bags was firm with quotations from $2.10 to $2.15 per 100 pounds. Spot offerings in moderate volume only.

Rapeseed Oil—Prices are steady at 88 and 90 cents per gallon for refined in barrels.

Soya Bean Oil—Prices are steady at former levels with crude oil in tanks quoted at 6½ and 6¾ cents per pound. Spot oil in barrels is quoted at 8½ and 9 cents per pound.

Talc and Soapstone—The production of talc and soapstone in 1920 was greater than in any previous year according to figures put forth by the United States Geological Survey, Department of the Interior. The sales in 1920 amounted to 224,290 short tons valued at $3,090,265 an increase over the previous year of 21 percent in quantity and 31 percent in value.

Caustic Soda—Prices are firm as there is a steady demand from the regular consuming trade and no tendency to shade prices. Some factors have asked up to $4.00 per cwt. for immediate deliveries.

Dimethylaniline—A steady demand has existed in this commodity although sales for the most part have been of small size. No sales of large lots having been recorded.

Zinc Oxide—During the last two weeks there has been a fairly steady demand with prices holding firm, at their former levels.

Exports and Imports—Chemical imports for the years immediately preceeding 1914 were about $85,000,000. At the present rate imports are $110,000,000 per year. Before 1914 exports averaged $27,000,000 annually. During the war period they rose to nearly $200,000,000. At present they are about $50,000,000.

Crude Rubber

NEW YORK, SEPTEMBER 7, 1921

The crude rubber market has remained practically unchanged and inactive during the past fortnight. The price of spot ribs has remained stationary, but other grades have fallen off slightly.

The tendency noted for several months past for the prices of futures to approximate more closely spot prices is becoming still more pronounced so that now future ribs are only 1 to 2 cents per pound above spot ribs.

A good deal of feeling exists in the market that spot rubber will soon command a premium. Many newcomers in the market do not realize and others may have forgotten that spot rubber in normal times has commanded higher prices than futures. The abnormal conditions brought about by the war reversed prices in such a way that futures ever since have had the advantage of spot rubber in price—a condition that evidently is gradually returning to its pre-war basis.

Latex grades also during the past fortnight have fallen still nearer the prices of ribs so that the former are now available at only about ¼ to ½ cent a pound above the latter.

Current quotations on standard grades are as follows:

Plantations			
Smoked sheets, ribbed, spot	.13¾	@	.14
October	.14	@	.14⅛
Oct.-Dec.	.14¼	@	.14½
Jan.-Mar.	.15	@	.15¼
Jan.-June	.16	@	.16¼
April-June	.17	@	.17⅛
Smoked sheet plain, spot	.10¾	@	.11
First latex pale crepe, spot	.14⅛	@	.14½
October latex	.14½	@	.14¾
Oct.-Dec. latex	.15	@	.15¼
Amber crepe, No. 1	.12¾	@	.13
Amber crepe, No. 2	.11¾	@	.12
Amber crepe, No. 3	.10¾	@	.11
Grand Central crepe	.09¾	@	.10
Clean brown crepe	.10¾	@	.11
Light clean brown crepe	.11¼	@	.11½
Rolled brown crepe	.10¾	@	.11
Paras			
Madeira Fine	.22½	@	.23
Up-river fine	.17¾	@	.18
Up-river medium	.14½	@	.14¾
Up-river coarse	.09¾	@	.10
Islands fine	.16¾	@	.17
Islands coarse	.07¾	@	.08
Caucho ball	.10	@	.10⅛
Cameta	.07¼	@	.07½
Acre fine (shipment)	.18	@	.18¼
Xingu Ball	.07¼	@	.07½
Tapajos fine, spot	.14¾	@	.15
Pontianac			
Prime	.11¼	@	.11½
Bangermassin	.06	@	.06¼
Palembang	.06½	@	.06¾
Gutta Siak	.15	@	—
Balata			
Panama Block	.28	@	.30
Surinam Sheets	.67	@	.70
Columbian Block	.38	@	.40
Cindad	.52	@	.54

Reclaimed Rubber

NEW YORK, SEPTEMBER 7, 1921

The reclaiming industry continues to operate in general at about twenty-five per cent of capacity, although the improvement in the tire trade has brought a certain degree of improvement in some factories. Quotations are practically unchanged since our last report and are nominally as follows:

Standard Reclaims			
Floating	$.13	@	$.14
Friction	.13	@	.14
Mechanical	.08	@	.10
Hose	.10½	@	.11½
Tires, truck	.08	@	.09
Tires, auto	.09	@	.10
White	.13	@	.14

Scrap Rubber

NEW YORK, SEPTEMBER 7, 1921

The scrap rubber market remains quiet with little demand and prices practically unchanged from our last report. Quotations are nominally as follows:

Auto tire peelings	.01⅛	@	.01⅜
Standard White auto	.01⅛	@	.01⅜
Mixed auto	.00⅝	@	.00¾
Bicycle tires	.00½	@	.00¾
Solid truck tires	.01	@	.01⅛
Boots and Shoes	.03	@	.03¼
Arctics, trimmed	.01⅜	@	.01¾
Arctics, untrimmed	.01⅛	@	.01¼
Inner tubes, No. 1	.04	@	.04½
Inner tubes, compounded	.02	@	.02¼
Battery jars, black compounded	Nominal		
Batteryjars, No. 1 bright fracture			
Inner tubes, red	.02	@	.02⅝
Heels and pads	Nominal		
Black mixed	.00¼	@	—
Garden hose	.00½	@	—
Air brake hose	.00½	@	—
Red packing	.01½	@	.01¾
Red mixed rubber	.02	@	—
White mixed rubber	.01¾	@	—

Advance to Bring Out a New Tire

The Advance Rubber Co., of 29 Gardner Avenue, Brooklyn, N. Y., announce their new Top Notch Cords Tires will be placed on the market within the coming month. This new tire is the result of a year's experimenting, and they believe they have finally produced a tire that justifies the name that has been given it. Considerable new machinery has been installed in their plant.

Louis Getz, formerly connected with the Braender Rubber & Tire Co. and with the Sterling Tire Corporation is now connected with the Advance Rubber Co.

American Rubber Patents

ISSUED AUGUST 9, 1921

1,386,599—To James H. Courvosier, Joplin, Mo. Pneumatic tire.

1,386,602—To Thomas Crossett, New York, N. Y. Mold and apparatus for making U packing.

1,386,603—To Robert H. Crumlich, Erie, Pa. Vulcanizing press.

1,386,668—To Charles E. Young, Akron, Ohio. Non-skid tire-protector.

1,386,843—To Albert Eugene Cook, Evanston, and Thomas Van Tuyl, Kankakee, Ill. Tractor-tread for pneumatic-tire wheels.

1,387,242—To Joshua Crane, Westwood, Mass. Tire.

1,387,243—To George N. Damon, Lorain, Ohio, assignor to Lorain Rubber Heel Co., Lorain, Ohio. Rubber heel and insert therefor.

1,387,260—To Thomas Wilton Hand, Sheffield, England, assignor to Davy Bros., Ltd., Sheffield, England. Tire slabbing and punching press.

New York Stock Prices

Following are the New York Stock Exchange quotations on the various rubber stocks listed for September 7:

	Bid	Asked
Ajax Rubber Co.	19¼	20
Fisk Rubber Co.	10	10⅛
B. F. Goodrich Co.	75	80
Kelly-Springfield Tire Co.	40¼	40¾
Keystone Tire Co.	12⅝	13
Lee Rubber & Tire Co.	25⅝	26
U. S. Rubber Co.	48½	48¾
do 1st pfd.	83	85

Akron Stock Prices

(Special Akron Correspondence)

Preferred shares of Akron rubber companies are showing strength on the local stock market in view of the general belief that those dividends which have not been restored will soon be declared again. Miller preferred jumped on the strength of the sinking fund requirement that the company retire about $300,000 of preferred stock this year.

Following are the quotations for Sept. 3.

	Bid	Asked
Amer. R. & T. com	30	35
Amer. R. & T. pfd	..	80
Amazon Rubber	..	20
Firestone T. & R. com	55	60
Firestone 6 pct. pfd.	80	85
do 7 pct. pfd	69	71
General T. & R. com	150	200
do 7 pct. pfd	75	80
B. F. Goodrich com	31	32 ½
do 7 pct. pfd	72	74
do 5 yr. 7 pct. pfd	90	91
Goodyear T. & R. com	11	11 ½
do 7 pct. pfd	28	29 ¼
Goodyear 8's	101	102 ⅛
India Rubber com	60	65
do 8 pct. pfd	55	65
Mason T. & R. com	9	10
do 7 pct. pfd	49	51
Marathon T. & R.	2¾	3
Miller Rubber com	50	59
do 8 pct. pfd	68	70 ½
Mohawk Rubber	65	80
Portage Rubber com	2	3
do 7 pct. pfd	3	4 ½
Republic Rubber com	15c	20c
do 7 pct. pfd	10	15
do 8 pct. pfd	..	2 ½
Rubber Products	35	60
Star Rubber com	..	100
do 8 pct. pfd	..	100
Swinehart T. & R. com	..	40
do 7 pct. pfd	..	70
Phoenix Rubber com	..	15
do pfd	..	90
Standard Tire com	..	100
do pfd	..	90

Recovering Valuable Solvents

The present watch words of factory officials are economy and efficiency. Yet thousands of dollars are being wasted daily by the evaporation into the atmosphere of expensive solvents. That the waste is unnecessary is being demonstrated in a number of progressive factories by the Benzine Condensation Company, 220 W. 42nd Street, New York.

Their system is said to be simple and practical and about 20 gallons of water is used for each gallon of solvent recovered. No refrigerators, compressors, or scrubbers are used. It is said to be the only known solvent recovery system that is eminently practical for a single spreading machine or impregnator of samll size.

Some machines have shown a recovery of over 90 per cent of pure solvent. This system of solvent recovery employed by this company has for years been in successful operation in Europe with this high percentage of recovery. The solvents which can be recovered include benzine, gasoline, benzol, and acetone.

A feature of the machine that helps to keep its operation at a minimum cost is the patented design that permits the use of running water to bring about rapid condensation without the use of any auxiliary apparatus. Another unique feature is that each unit of a battery of machines is independent of all others, and further that it can be adapted to any machine without alterations being made.

New Incorporations

NEW YORK

Brighton Tire & Rubber Co., to manufacture tires etc. $10,000. Incorporators: R. Vagt, H. J. Hurn both of Amityville; A. F. Rollin, 1090 Bedford Avenue. Principal office, Brooklyn, N. Y.

Paramount Hospital Supplies, Inc.; to manufacture and sell, surgical instruments, rubber goods, etc. $20,000. D. M. Crabb, president, 295 Mount Prospect avenue, Newark, New Jersey; J. Rosenberg, vice-president, 94 North Broadway, Yonkers; E. Spector, secretary, 51 Chambers street, New York. Principal office, 1231 Third avenue, New York.

Winthrop Tire & Supply Co. Inc.; to deal in tires and automobile accessories. $5,000. Incorporators: J. J. Burke, 164 Highland Boulevard, E. E. Deffaa, 60 Stockholm street, both of Brooklyn; J. S. Seiler, Forest Parkway, Woodhaven Post Office, Queens Borough. Principal office, Brooklyn, New York.

Trynoski-Peterson Tire & Accessory Co., Inc., to deal in automobile accessories. $50,000. Incorporators: K. J. Trynoski, E. C. Peterson, E. C. Hannaall of Rochester, New York. Principal office, Rochester, New York.

Stanard-Snyder Co. Inc., to buy, sell, manufacture and repair all kinds of tires, etc. $10,000. President and treasurer, C. H. Stanard; vice president, E. Snyder; secretary, T. Dohm-all of Syracuse, New York. Principal office, 603 North Lowell avenue, Syracuse, New York.

Brooklyn Record Syringe Manufacturing Co., Inc., to manufacture and deal in surgical instruments, etc. $10,000. Presiaent, 319, 20th Street; vice president, M. Golka, 274 21st street; A. Golka, secretary and treasurer, 5807 Fifth avenue—all of Brooklyn, New York.

Fur-Ever Footwear Corporation, to manufacture rubber-lined shoes. $10,000. President, A. J. Geist; vice president, S. Alexandre; treasurer, C. J. Gordon; secretary, J. H. Herbst. Principal office, Garden City, Long Island.

Lehr Auto Supply Co. Inc.; to deal in tires, etc. $50,000. Incorporators: B. & H. Lehr, both of 9 East 109 street, New York City; J. Lehr, 652 Willoughby avenue, Brooklyn, New York.

Fibre Tire & Rubber Co., Inc. To manufacture tires, etc. $100,000. Incorporators: M. N. Salamon, 70 Quincey St., Passaic, N. J.; E. E. Stockle, Wilson avenue; E. F. File, Belmore avenue—both of Belmore, L. I., New York.

Solimine Trading Co., Manhattan. To make rubber heels. $60,000. Incorporators; R. Blando, A. A. Scodes, W. D. Yankauer. Attorney, Jenks & Rogers, 67 Wall St., J. E. Bates & Co., Inc. To manufacture rubber boots and shoes. $600. Incorporators, J. E. Bates, 374 Washington Ave., L. W. Bates, 85 Lefferts Place, Brooklyn; H. Clark, Ridgeview Ave., White Plains.

Sound Tire Service Inc., to manufacture tires. $10,000. Incorporators: W. H. Katz, 45 Tiemann Place; S. Streit, 141 Attorney street—both of New York City; C. J. Cockran, 1137 Dean street, Brooklyn. Principal office, Brooklyn, New York.

Paragon Tire Co. Inc., to manufacture tires, etc. $10,000. Incorporators: E. S. Wolbarst; J. P. Reiper, both of 66 Pine Street; I. Skutch, 317 West 99 street, both in New York City.

Lightning Change Auto Wheel Corporation, to deal in automobile tires, etc. Incorporators: J. M. Sebring, Eggleston Hotel; F. Hess, 41 Clifford avenue, both of Rochester; B. R. Roblin, Holly—both in New York. Principal office in Rochester, New York.

NEW JERSEY

Hudson Garter Co., to manufacture garters, elastic, and rubber goods. $100,000. Incorporators; Jacob Shulman, 226 Cleveland avenue, I. Hantman, 756 Harrison avenue, both of Harrison; Joseph Shulman, 17-19 Little street, Newark—both in New Jersey; M. H. Cooper, 322 East 92 street, New York City. Principal office, 790 Broad street, Newark, New Jersey.

Tire Service Co., to sell automobile tires, tubes, etc. $50,000. Incorporators: J. A. Smith, 249 Delevan street; J. A. Hennessey, 83 Burne street; W. F. Drury, 102 Suydam street—all of New Brunswick, New Jersey. Principal office, 412 George street, New Brunswick, New Jersey.

Rubber Service Co., South River, New Jersey. $50,000. Incorporators: Herman W. Ritter, A. K. White, C. R. Holman—all of New Brunswick.

Chicago Rubber Clothing Co., to manufacture rubber clothing, etc. $500,000. Principal office, 44 Clinton street, Newark, N. J.

Armorclad Manufacturing Co., Inc. $100,000. Incorporators: F. Bender, Patterson; A. Finkensieper, Clifton; L. Ouerbach, Passaic. Principal office, 37 S. Fourth street, Clifton. Agent in charge A. Finkensieper.

United Tire Co., to buy and sell tires, etc. $10,000. Incorporators: A. Black, 105 Princeton avenue; P. M. Dorsey, 224 Walnut avenue; H. Davidson, Sanhican Drive—all of Trenton, N. J. Principal office, 137 East State street, Trenton, N. J. Agent in charge, J. I. Davidson.

DELAWARE

Henry Tire Corporation, Dover. Manufacture of the Henry tire for Ford cars; $150,000.

American Rubber Preserver Corp., to manufacture tires. $500,000. Attorney, Corporation Trust Co. of America, Wilmington.

National Tire Stores, Inc., to deal in rubber tires and auto accessories etc. $10,000 of the capital stock is represented in Indiana. R. Wysong, Michigan City is named as agent.

Corrugated Rubber Corporation, to deal in rubber in crude, raw and manufactured states. $1,500,000. T. L. Croteau, M. A. Bruce, S. 500,000. T. L. Croteau, M. A. Bruce, S. E. Dill—all of Wilmington, Delaware; Delaware agent: Corporation Trust Co. of America.

Benjamin Products Corp., to deal in rubber, etc. $1,000,000. Attorney, Registrar and Transfer Co.

Armour Tire Corp. $1,000,000. Attorney, Charter Service Corporation.

B. & B. Tire Co.; to deal in automobile tires. $50,000. Incorporators: J. Williams, R. O. Blakely, F. Bradour. Delaware agent, Capital Trust Co. of Delaware, Wilmington, Delaware.

Yale Tire Co., to manufacture and sell tires. $100,000. Delaware agent, Corporation Service Co., Wilmington, Delaware.

MASSACHUSETTS

Royal Tire Fabric Company, Worcester. $50,000. Incorporators: David Miller, Samuel Miller and Harry Taber, Worcester.

Boston Auto Tire Exchange, Inc., to manufacture rubber tires, inner tubes, etc. $25,000. Incorporators: J. Rosenfield, 85 Harrishof Street, Roxbury; I. L. Rosenfield, 49 Clarkwood Street, Dorchester; P. Rosenfield, 86 Elm Street, Chelsea, Principal office, Boston, Mass.

MARYLAND

Tyler Airless Tube Co.; to buy, sell and manufacture automobile tires, tubes, etc. $100,000. Incorporators: E. L. Wade, W. J. Murphy, E. C. Rossel. Principal office, 757 Calvert Building, Baltimore, Maryland.

MAINE

Union Rubber Co,. Inc., to manufacture and deal in rubber boots, shoes, etc. $500,000. Common stock, $450,000; preferred, $50,000. Incorporators: Charlotte L. Lello, Calais, Harold H. Murchie, Frederick S. Twiss, all of Calais.

OHIO

The Forest Tire and Rubber Company, Cleveland; to manufacture and deal in tires. $5,000. Incorporators: Samuel J. Gottlieb, Adolph Z. Jaffe, Rudd H. Bender, Max M. Jaffee and V. C. Lynch.

PENNSYLVANIA

Brown Puncture Proof Tube Co., to manufacture a patented puncture-proof inner tube for automobile tires. $25,000. F. R. Carruth, President; R. D. Moore, Vice President; C. E. Johnson, Secretary and Treasurer. Principal office, 4006 Arcade Building, Pittsburgh, Pa.

TEXAS

Lee Tire and Service Co., to buy and sell tires and accessories. $9,000. Incorporators: N. B., G. C., and R. J. Beard, all of Fort Worth, Texas. Principal office, Fort Worth, Texas.

FLORIDA

Peninsular Tire & Rubber Co., to manufacture tires and tubes. $1,500,000. Incorporators: A. B. McMullen; J. D. Wood; S. H. Rogers; W. B. Griffin; W. B. Corsey; J. H. Stafford; T. E. Bryan; M. K. Thomas. Principal office, Tampa, Florida.

Z i n c

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